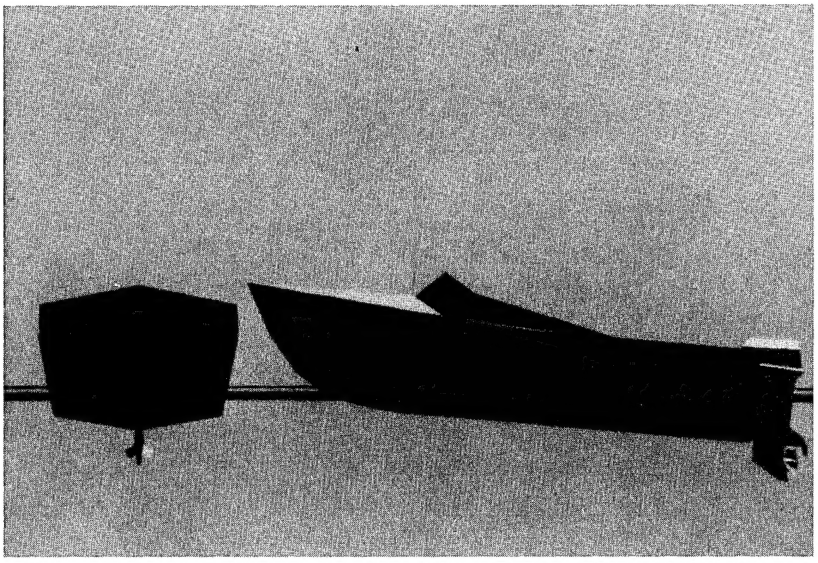
Recreational Boat Collision Accident Research

Volume 2
Appendices: Computer Simulation Data



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APPENDIX A

Specifications for the Computer Simulation

COMPUTER SIMULATION OF A RECREATIONAL BOAT COLLISION ACCIDENT
Guidelines for the Simulation

June 21, 1991

ABSTRACT

Under a grant from the United States Coast Guard, Underwriters Laboratories, Inc. Marine Department is conducting research to develop techniques for reconstructing collision accidents involving recreational boats. One of the purposes of this research is to identify technologies that have proven useful in other areas of accident reconstruction that may contribute significantly to the analysis of boat collisions. One of the technologies that has been recognized as providing much success in the past is that of computer simulation and computer aided accident reconstruction. This document outlines the necessary steps to be taken in which an attempt will be made to model a boat collision accident using state of the art computer simulation technology.

INTRODUCTION
Guidelines for the Simulation

The contents of this document are provided so that those who are involved in the execution of this computer simulation project have a common starting point, and are aware of the desired goals and methods anticipated. It is in no way intended to limit the creativity of those involved, or place bounds on innovative solutions to complex problems. This is the first attempt known to date where the complex dynamics of a recreational small boat collision have been modeled using computer simulation. Since this is the first attempt at such a project, it would not be wise to develop a set of rigid inflexible requirements to which this simulation must comply. Instead however, the contents of this document are to be considered as guidelines. Great care has been given to the concepts outlined herein. Participants in this project should not deviate from the guidelines herein, unless approval is obtained from the UL Collision Research Project Coordinator.

Background

The science of accident reconstruction has advanced rapidly in numerous areas in the last twenty years, especially where aircraft and automobiles are involved. Advances in technology, years of intensive research, and proper training of investigators have provided the capability of reconstructing many accidents today, that would once have been thought impossible.

In spite of advances in other transportation media, the area of collision accident reconstruction involving recreational boats remains one area that is still undeveloped. There are no textbooks, no past studies, no databases of structural crash data, and essentially no "experts" which can fully unravel the dynamics of boat collisions.

The United States Coast Guard has recognized the lack of data available on boating collision accident reconstruction techniques, and the need for such information. This type of data is essential to the understanding of the dynamics of boat collisions, and is part of the overall process of understanding what happens to the vessels, and the occupants involved in a collision. Under a grant from the United States Coast Guard, Underwriters Laboratories, Inc. is conducting research to develop the necessary techniques to reconstruct various types of boating collision accidents. Part of this research is to investigate the feasibility and usefulness of computer simulation with regard to accident reconstruction of boat collision accidents.

Purpose

The overall purpose of this project is to investigate the feasibility and the potential usefulness of computer simulation in the reconstruction and simulation of boat collisions. This is in many ways a proof of concept approach in which it is important to emphasize both future possibilities and the accuracy of the current model.

In particular, specific purposes and goals are listed below:

1) To simulate a common two-boat collision accident scenario

2) To formulate algorithms of impact that can be used to approximate the response of the boats in the collision scenario

3) To identify potential strengths and weaknesses of the use of computer simulation in boat collision accident reconstruction and or prediction

4) To identify methods to relate impact damage to the accident scenario

5) To evaluate the potential of using computers to explore the minimum speed threshold theory

Scope

This simulation will cover one collision scenario. The craft modeled will be typical of boats in the 16 to 19 ft length range. The emphasis will be placed on the dynamic response of both boats involved, taking into account the hydrodynamic forces. Other than extremely simplified approximations, structural damage will not be modeled in detail. This will be a dynamic simulation, not a stress analysis of boat structures.

METHOD

UL Input

The specific methods used to approximate the various complexities of the collision process are critical to producing a realistic model. The algorithms and methods of simulation are to be reviewed by UL prior to implementation into the simulation. This is to allow UL the opportunity to contribute the knowledge gained from numerous on the water collision experiments to the simulation project.

Collision Scenario

For this collision, one boat will be stationary and is subsequently referred to as the target boat. The second boat, referred to as the bullet boat, shall strike the target boat at approximately a 90 degree angle to the target boat centerline. The impact point should be chosen, if practicable, so as to provide the opportunity for the impacted craft to rotate in the horizontal plane about its vertical axis of rotation during during the collision process. The preferred impact point is one third of the boat length as measured from the bow, and should provide ample opportunity for rotation of the target boat. This should place the impact forward of the center of gravity and the center of lateral resistance of the target boat. If this location of the impact point is not feasible, an acceptable alternative would be two-thirds of the boat length as measured from the bow.

Collision Speeds

The collision shall be simulated using the same scenario, and same boats, with the bullet boat traveling at each of the following speeds: 5, 10, 15, 20, 25, and 30 mph. The target boat is to be stationary prior to impact. Optional runs may be conducted at 40 and 50 mph.

Time Frame

The simulation should begin at least two seconds before impact and continue for one second after the bullet boat re-enters the water. In the event that the bullet boat does not leave the water, the simulation shall continue for five seconds after initial impact.

Boat Designs

The particular boats modeled for the collision shall be typical of motorboats currently used today in the 16 to 19 ft length range. Ideally these boats should have hull forms typical of a wide variety of today's craft, rather than a design unique to a particular manufacturer or boat. In the interest of economy, the same boat shape may be used for both the bullet and the target boat. The bullet boat must have an appendage representative of an outdrive attached. The simulated outdrive is not required to pitch up during the impact.

Engine Thrust

The thrust of the engine of the bullet boat may be a significant contributing factor to the collision process. Ideally the thrust for a given boat speed should remain constant until the propeller clears the water. One variation of this theory is that once the pitch of the bullet boat (or more accurately that of the outdrive) exceeds 5 degrees, the thrust becomes negligible. Specifics of the best time to cut the thrust forces during the collision will be provided by UL at a later time during the simulation research.

Degrees of Freedom

The ideal simulation would model all degrees of freedom for both boats. However, for purposes of this application, the bullet boat shall be free to rotate in pitch, and translate in the vertical and horizontal directions. In other words, the bullet boat may be adequately modeled restricting motion to 3 dof, (excluding lateral displacement, roll, and yaw). Additional degrees of freedom may be modeled but the above are considered minimums.

The target boat shall have 6 dof. It shall be be free to rotate and translate about all three axes.

Gravitational, Inertial, and Contact Forces

Contact forces must be modeled between the surfaces of the two boats. Gravity is to be in effect on both boats. Both boats must be assigned mass and inertial properties representative of the types of boats they represent. Contact between the propeller and skeg on the bullet boat is to modeled relative to the hull surface of the target boat.

Hydrodynamic Forces

To the maximum extent possible, the hydrodynamic forces should be modeled on the target boat. The buoyancy forces must be accurately modeled, as must the instantaneous center of lateral resistance (CLR). The resulting center of rotation should be modeled to the extent practicable using the relationship between the center of gravity (CG) of the boat, and the instantaneous CLR. Approximations for hydrodynamic loads in the lateral directions for the target boat should be approximated as best as possible, otherwise the resulting motion of the target boat during impact will not be at all realistic.

The hydrodynamics are less critical to the bullet boat, except that it must be oriented and placed in the correct position relative to the target boat just prior to impact. In other words the correct trim angle, and depth in water are to be varied with each boat speed to place the bullet boat in the proper position as a function of its speed. For example, we would expect the bullet boat to be in a planing orientation at 25 mph and to sit much deeper in the water at 5 mph. It is not necessary to "drive" the target boat through the water by simulating all the hydrodynamic forces involved in sustaining a planing craft driven across the water's surface.

Friction Forces

A significant portion of the energy in a collision involving an override (where one boat literally runs over the top of another) is absorbed in friction. Coefficients of friction for the contact area between the two boats can be estimated, and should be used for the simulation. Friction will not come into play until an override situation begins to occur.

Structural Response of Boat Hulls

The bullet boat may be treated as simple rigid object, and with no allowance necessary for deformation during impact.

The target boat must be modeled with some capability of deforming during the impact in order to approximate a realistic situation. The response of the side of hull of the target boat which is first struck must be modeled in such as a way as to allow a realistic response at varying impact speeds. For example at low speeds, no penetration of the hull side will occur, and at higher speeds the hull side will be penetrated. The side deformation will be represented by a mechanical system model, rather than any kind of detailed structural analysis.

Modeling of the Damage Response

1) Skeg/prop mark- In a typical collision scenario of the type being modeled here, the propeller and/or the skeg of the lower unit of the engine usually leaves a distinct cut in the side of the hull where it penetrated. This mark can be used to establish at one point in time a fairly definite relative geometry of the two boats involved. The skeg mark would be used in a reconstruction analysis in conjunction with the geometry of the target boat to estimate the boats' most likely relative positions. The point where the outdrive on the bullet boat penetrates the hull of the target boat should be indicated on the target boat after the collision. A simple mark placed where the propeller or "torpedo" (i.e. the gearcase) penetrated the side of the hull is sufficient. It is not necessary for the graphics on the target boat to model a "damaged" appearance. It will not be necessary to simulate the desired force required to tip up the outdrive during impact.

2) Scratch Evidence and Transfer Marks- When two boats are in contact with each other, the scratches left behind indicate the path of one relative to the other. Ideally, the computer should keep track of the path of the contact points of the propeller or skeg through the target boat during the collision. At a minimum, these points should have a line drawn through them on the target boat after the collision. This line should indicate the path of the bullet boat through the target boat during the collision. It should be noted that if significant rotation of the target boat occurs about the vertical axis that this line may not be straight. It is not required that contact line be drawn on the bottom of the hull of the bullet boat for this simulation, however such a line would reveal if significant rotation of the stationary target boat during impact causes lines on the bottom of the of the bullet boat that are not parallel to the centerline.

Simulation Software

The simulation will be conducted using the ADAMS (Automatic Dynamic Analysis of Mechanical Systems) software.

Graphics

Final graphic output of the simulation will be performed using the "Animator" software package from Simulation Dynamics, Inc.

DATA REQUIREMENTS

Data should be provided in both tabulated and graphical forms. Tabulated should be provided for the parameters listed below. Alternative data requiring equivalent effort may be provided subject to the agreement of all concerned.

Values for the cg of the bullet boat, and for the cg of the target boat, as a function of time and expressed as

1) x,y, and z (position)
2) x',y',z' (velocity)
3) x",y", z" (acceleration)

Values for the pitch angle of the bullet boat as a function of time expressed as

1) pitch angle
2) pitch rate
3) pitch acceleration

Values for the yaw angle of the target boat as a function of time expressed as

1) yaw angle
2) yaw rate
3) yaw acceleration

Selected graphs will be necessary to assist with the analysis of the simulations. The graphical output would likely be selected graphs from the following list. Not all of these graphs would be required for each simulation run. The graphs most useful to the data analysis would be selected once the project has begun. Possible useful graphs would likely be:

For the bullet boat:

A) Vertical coordinate of the cg vs. the downrange travel, or z as a function of x. (Assuming z is the vertical axis, and x is the horizontal axis parallel to the centerline of the bullet boat). This should provide the visual plot of the flight path of the cg of the bullet boat.

B) Components of acceleration, vertical and horizontal as a function of time.

C) The resultant total acceleration value of the cg of the bullet boat as a function of time.

D) Pitch acceleration as a function of time.

For the target boat:

E) The yaw acceleration as a function of time

F) The lateral position of the cg as a function of time

G) The lateral acceleration of the cg as function of time

DOCUMENTATION REQUIREMENTS

The documentation provided for the simulation should include all necessary information such that anyone who is equipped with the ADAMS software and the necessary computer hardware can execute the application run. The documentation should also include videotapes of the runs conducted. The specifics are outlined below:

1) Printed output of the ADAMS source code including the ADAMS data set and FORTRAN subroutines with adequate documentation

2) One original videotape of simulation in U-matic format

3) Three copies of videotape of simulation in VHS format

4) Two diskette copies of all data including boat modeling information and other data used in the simulation

5) If practicable, a disk file with tabulated data of selected parameters for future analysis

The videotapes of the simulation should contain runs at real time, and for the higher speed runs over 10 mph, it is desirable for the runs to be also recorded in slow motion.

ACCESSIBILITY OF DATA

This project is being conducted under a grant from the United States Coast Guard. As such, all data acquired under this program is subject to becoming a part of the UL report submitted to the USCG upon completion of the project.

APPENDIX B

ADAMS - User Defined Subroutines

```
OPT     = -g
LIBS    =
SRC     = SFMAIN.f REQSUB.f SFOSUB.f HULLGM.f UTILS.f
OBJ     = $(SRC:.f=.o)
ALL     = ulsta
DBGALL  = uldbg

.f.o:
        f77 $(OPT) -c $*.f

$(DBGALL): $(OBJ) Makefile
        f77 $(OPT) $(OBJ) $(LIBS) -o $(DBGALL)
        @echo "Compilation is complete"

adams: $(OBJ)
        /usr/local/applications/mdi521/mdi cr-u i n REQSUB.o SFOSUB.o HULLGM.o UTILS.o -n $(ALL) exit
        strip $(ALL)
        @echo "ADAMS build complete"

clean:
        rm -f $(ALL) $(OBJ)
        @echo "Executables and ojbect files have been removed"
```

```
C*********************************************************************
C HULLGM.f
C
C 910829 BAP    The hull geometry subroutine is given a displacement
C               vectory and computes various geometric points, lengths,
C               areas and volumes.  The hull geometry data points are
C               contained in this file and should correspond to the
C               ADAMS graphics.
C*********************************************************************
      SUBROUTINE HULLGM(CMREF, STATE, VOLUME, CENTRD, WTKEEL, WTBEAM,
     2                  LTAREA, ERRFLG)
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      DOUBLE PRECISION CMREF(3)
      DOUBLE PRECISION STATE(6)
      DOUBLE PRECISION VOLUME
      DOUBLE PRECISION CENTRD(3)
      DOUBLE PRECISION WTKEEL
      DOUBLE PRECISION WTBEAM
      DOUBLE PRECISION LTAREA
      LOGICAL          ERRFLG

      DOUBLE PRECISION A(3), B(3), C(3)
      DOUBLE PRECISION DSHULL(90, 3)
      DOUBLE PRECISION HULL(90, 3)
      INTEGER          INIT
      DOUBLE PRECISION OSTATE(6)
      DOUBLE PRECISION VECTOR(6)

c     DATA CMREF /   11.511, 0., 2. /
C     DATA CMREF /   11.770, 0., 2.00 /
      DATA INIT / 0 /

C   marker/2000, qp= 0.000,  0.000, 4.083

      DATA (DSHULL( 1, J), J=1,3) /  1.000,  1.333, 3.979 /
      DATA (DSHULL( 2, J), J=1,3) /  1.000,  0.000, 2.292 /
      DATA (DSHULL( 3, J), J=1,3) /  1.000,  0.000, 2.292 /
      DATA (DSHULL( 4, J), J=1,3) /  1.000,  0.000, 2.292 /
      DATA (DSHULL( 5, J), J=1,3) /  1.000, -1.333, 3.979 /

      DATA (DSHULL( 6, J), J=1,3) /  2.000,  2.167, 3.875 /
      DATA (DSHULL( 7, J), J=1,3) /  2.000,  0.708, 2.042 /
      DATA (DSHULL( 8, J), J=1,3) /  2.000,  0.000, 1.125 /
      DATA (DSHULL( 9, J), J=1,3) /  2.000, -0.708, 2.042 /
      DATA (DSHULL(10, J), J=1,3) /  2.000, -2.167, 3.875 /

      DATA (DSHULL(11, J), J=1,3) /  3.000,  2.708, 3.813 /
      DATA (DSHULL(12, J), J=1,3) /  3.000,  1.625, 1.750 /
      DATA (DSHULL(13, J), J=1,3) /  3.000,  0.000, 0.500 /
      DATA (DSHULL(14, J), J=1,3) /  3.000, -1.625, 1.750 /
      DATA (DSHULL(15, J), J=1,3) /  3.000, -2.708, 3.813 /

      DATA (DSHULL(16, J), J=1,3) /  4.000,  3.021, 3.708 /
      DATA (DSHULL(17, J), J=1,3) /  4.000,  2.125, 1.521 /
      DATA (DSHULL(18, J), J=1,3) /  4.000,  0.000, 0.208 /
      DATA (DSHULL(19, J), J=1,3) /  4.000, -2.125, 1.521 /
      DATA (DSHULL(20, J), J=1,3) /  4.000, -3.021, 3.708 /

      DATA (DSHULL(21, J), J=1,3) /  5.000,  3.229, 3.625 /
      DATA (DSHULL(22, J), J=1,3) /  5.000,  2.458, 1.292 /
      DATA (DSHULL(23, J), J=1,3) /  5.000,  0.000, 0.063 /
      DATA (DSHULL(24, J), J=1,3) /  5.000, -2.458, 1.292 /
      DATA (DSHULL(25, J), J=1,3) /  5.000, -3.229, 3.625 /

      DATA (DSHULL(26, J), J=1,3) /  6.000,  3.333, 3.521 /
      DATA (DSHULL(27, J), J=1,3) /  6.000,  2.667, 1.063 /
      DATA (DSHULL(28, J), J=1,3) /  6.000,  0.000, 0.000 /
      DATA (DSHULL(29, J), J=1,3) /  6.000, -2.667, 1.063 /
      DATA (DSHULL(30, J), J=1,3) /  6.000, -3.333, 3.521 /

      DATA (DSHULL(31, J), J=1,3) /  7.000,  3.417, 3.458 /
      DATA (DSHULL(32, J), J=1,3) /  7.000,  2.833, 0.833 /
      DATA (DSHULL(33, J), J=1,3) /  7.000,  0.000, 0.000 /
      DATA (DSHULL(34, J), J=1,3) /  7.000, -2.833, 0.833 /
      DATA (DSHULL(35, J), J=1,3) /  7.000, -3.417, 3.458 /

      DATA (DSHULL(36, J), J=1,3) /  8.000,  3.458, 3.333 /
      DATA (DSHULL(37, J), J=1,3) /  8.000,  2.896, 0.667 /
      DATA (DSHULL(38, J), J=1,3) /  8.000,  0.000, 0.000 /
      DATA (DSHULL(39, J), J=1,3) /  8.000, -2.896, 0.667 /
      DATA (DSHULL(40, J), J=1,3) /  8.000, -3.458, 3.333 /

      DATA (DSHULL(41, J), J=1,3) /  9.000,  3.500, 3.271 /
      DATA (DSHULL(42, J), J=1,3) /  9.000,  2.917, 0.583 /
      DATA (DSHULL(43, J), J=1,3) /  9.000,  0.000, 0.000 /
      DATA (DSHULL(44, J), J=1,3) /  9.000, -2.917, 0.583 /
      DATA (DSHULL(45, J), J=1,3) /  9.000, -3.500, 3.271 /

      DATA (DSHULL(46, J), J=1,3) / 10.000,  3.500, 3.208 /
      DATA (DSHULL(47, J), J=1,3) / 10.000,  2.938, 0.500 /
      DATA (DSHULL(48, J), J=1,3) / 10.000,  0.000, 0.000 /
      DATA (DSHULL(49, J), J=1,3) / 10.000, -2.938, 0.500 /
      DATA (DSHULL(50, J), J=1,3) / 10.000, -3.500, 3.208 /

      DATA (DSHULL(51, J), J=1,3) / 11.000,  3.500, 3.208 /
      DATA (DSHULL(52, J), J=1,3) / 11.000,  2.938, 0.500 /
      DATA (DSHULL(53, J), J=1,3) / 11.000,  0.000, 0.000 /
      DATA (DSHULL(54, J), J=1,3) / 11.000, -2.938, 0.500 /
      DATA (DSHULL(55, J), J=1,3) / 11.000, -3.500, 3.208 /

      DATA (DSHULL(56, J), J=1,3) / 12.000,  3.500, 3.208 /
      DATA (DSHULL(57, J), J=1,3) / 12.000,  2.938, 0.500 /
      DATA (DSHULL(58, J), J=1,3) / 12.000,  0.000, 0.000 /
      DATA (DSHULL(59, J), J=1,3) / 12.000, -2.938, 0.500 /
      DATA (DSHULL(60, J), J=1,3) / 12.000, -3.500, 3.208 /

      DATA (DSHULL(61, J), J=1,3) / 13.000,  3.500, 3.208 /
      DATA (DSHULL(62, J), J=1,3) / 13.000,  2.938, 0.500 /
      DATA (DSHULL(63, J), J=1,3) / 13.000,  0.000, 0.000 /
      DATA (DSHULL(64, J), J=1,3) / 13.000, -2.938, 0.500 /
      DATA (DSHULL(65, J), J=1,3) / 13.000, -3.500, 3.208 /

      DATA (DSHULL(66, J), J=1,3) / 14.000,  3.500, 3.208 /
      DATA (DSHULL(67, J), J=1,3) / 14.000,  2.938, 0.500 /
      DATA (DSHULL(68, J), J=1,3) / 14.000,  0.000, 0.000 /
      DATA (DSHULL(69, J), J=1,3) / 14.000, -2.938, 0.500 /
      DATA (DSHULL(70, J), J=1,3) / 14.000, -3.500, 3.208 /

      DATA (DSHULL(71, J), J=1,3) / 15.000,  3.500, 3.208 /
      DATA (DSHULL(72, J), J=1,3) / 15.000,  2.938, 0.500 /
      DATA (DSHULL(73, J), J=1,3) / 15.000,  0.000, 0.000 /
      DATA (DSHULL(74, J), J=1,3) / 15.000, -2.938, 0.500 /
      DATA (DSHULL(75, J), J=1,3) / 15.000, -3.500, 3.208 /

      DATA (DSHULL(76, J), J=1,3) / 16.000,  3.500, 3.208 /
      DATA (DSHULL(77, J), J=1,3) / 16.000,  2.938, 0.500 /
      DATA (DSHULL(78, J), J=1,3) / 16.000,  0.000, 0.000 /
      DATA (DSHULL(79, J), J=1,3) / 16.000, -2.938, 0.500 /
```

```
      DATA (DSHULL(80, J), J=1,3) / 16.000, -3.500, 3.208 /

      DATA (DSHULL(81, J), J=1,3) / 17.000,  3.500, 3.208 /
      DATA (DSHULL(82, J), J=1,3) / 17.000,  2.938, 0.500 /
      DATA (DSHULL(83, J), J=1,3) / 17.000,  0.000, 0.000 /
      DATA (DSHULL(84, J), J=1,3) / 17.000, -2.938, 0.500 /
      DATA (DSHULL(85, J), J=1,3) / 17.000, -3.500, 3.208 /

      DATA (DSHULL(86, J), J=1,3) / 18.000,  3.500, 3.208 /
      DATA (DSHULL(87, J), J=1,3) / 18.000,  2.938, 0.500 /
      DATA (DSHULL(88, J), J=1,3) / 18.000,  0.000, 0.000 /
      DATA (DSHULL(89, J), J=1,3) / 18.000, -2.938, 0.500 /
      DATA (DSHULL(90, J), J=1,3) / 18.000, -3.500, 3.208 /

      SAVE

c      write(6,*) 'hullgm called'
c      write(6,*) ' state='
c      write(6,*) state

      IF (INIT .EQ. 0) THEN
          INIT = 1
C
C Check the hull array data
C         DO I=1, 90
C             WRITE(6,'(15,3f10.3)') I, (DSHULL(I,J), J=1,3)
C         ENDDO
C
C Transform from the design position to the boat frame where
C the center of mass is at 0, 0, 0
C
C Transform the points to the BOAT frame
          VECTOR(1) = -CMREF(1)
          VECTOR(2) = -CMREF(2)
          VECTOR(3) = -CMREF(3)
          VECTOR(4) =   0.
          VECTOR(5) =   0.
          VECTOR(6) =   0.
          CALL XFORM(DSHULL, DSHULL, 90, VECTOR, ERRFLG)
      ENDIF

C
C Transform the points to the GLOBAL frame
          CALL XFORM(DSHULL, HULL, 90, STATE, ERRFLG)

C
C Find the submerged volume and its centroid
          CALL SUBVOL(HULL, 90, 18, VOLUME, CENTRD, ERRFLG)

C
C Find the wetted keel.

C Assume that the transom is the last to leave and the first to
C enter.

C     Search for the first point under water.
      ICROSS = 0
      DO ISTA = 1, 18
          I = (ISTA-1)*5 + 3
          IF (ICROSS .EQ. 0 .AND. HULL(I,3) .LT. 0.) THEN
              ICROSS = ISTA
          ENDIF
c          write(6,*) i, hull(i,3)
      ENDDO

C If the last station is out of the water, the entire boat is out.
      IF (ICROSS .EQ. 0) THEN
          WTKEEL = 0.

C If the first station is under water, the entire boat is under.
      ELSEIF (ICROSS .EQ. 1) THEN
          WTKEEL = 18.

C Find the point between the stations.
      ELSE
          I = (ICROSS-1)*5 + 3
          CALL V3LOAD(HULL(I,1), HULL(I,2), HULL(I,3), A)
          I = (ICROSS-2)*5 + 3
          CALL V3LOAD(HULL(I,1), HULL(I,2), HULL(I,3), B)
          CALL XSEGZ0(A, B, C, ERRFLG)
          IF (ERRFLG) THEN
              WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
              STOP
          ENDIF
          CALL V3LOAD(HULL(88,1), HULL(88,2), HULL(88,3), B)
          CALL VDIF(B, C, A)
          WTKEEL = VLEN(A)
      ENDIF

C
C Find the wetted beam.  Measure the beam at the transom.  Assume
C it is constant.
      CALL V3LOAD(HULL(86,1), HULL(86,2), HULL(86,3), A)
      CALL V3LOAD(HULL(90,1), HULL(90,2), HULL(90,3), B)
      CALL VDIF(A, B, C)
      WTBEAM = VLEN(C)

C
C The lateral area will have to wait.
      LTAREA = 0.

      RETURN
      END
C*********************************************************************
C SUBVOL
C
C 910811 BAP    Find the submerged volume and it's centroid
C*********************************************************************
      SUBROUTINE SUBVOL(HULL, NPTS, NSTATN, VOLUME, CENTRD, ERRFLG)
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      DOUBLE PRECISION HULL(NPTS, 3)
      DOUBLE PRECISION VOLUME
      DOUBLE PRECISION CENTRD(3)
      LOGICAL          ERRFLG

      DOUBLE PRECISION A(3), B(3), C(3)
      DOUBLE PRECISION OLD
      DOUBLE PRECISION STACEN(18, 3)
      DOUBLE PRECISION STATN(18)
      DOUBLE PRECISION STATTL

C      write(6,*) 'SUBVOL stub called.'
      IF (NSTATN .GT. 18) THEN
          WRITE(6,*) 'ERROR: SUBVOL ARRAY STATN TOO SMALL'
          STOP
      ENDIF

C
```

```
C Find the number of points for each station
      NTRI = NPTS / NSTATN
C
C For each of the stations
      DO ISTA = 1, NSTATN
          STATN(ISTA) = 0.
          STACEN(ISTA, 1) = 0.
          STACEN(ISTA, 2) = 0.
          STACEN(ISTA, 3) = 0.
C
C Find the area of the submerged part of the station
C For each triangle in the station
          I = (ISTA - 1) * NTRI + 1
          CALL V3LOAD(HULL(I,1), HULL(I,2), HULL(I,3), A)
          DO ITRI = 2, NTRI-1
C
C Set up the triangle
              I = (ISTA - 1) * NTRI + ITRI
              CALL V3LOAD(HULL(I,1), HULL(I,2), HULL(I,3), B)
              I = I + 1
              CALL V3LOAD(HULL(I,1), HULL(I,2), HULL(I,3), C)
C
C The intersection plane is always Z = 0.
C Determine the area of the triangle below the Z = 0. plane
              CALL ASUBTR(A, B, C, AREA, CENTRD)
C
C Sum up the area of the station
              STATN(ISTA) = STATN(ISTA) + AREA
C
C Sum up the moment of the station
              STACEN(ISTA, 1) = STACEN(ISTA, 1) + AREA*CENTRD(1)
              STACEN(ISTA, 2) = STACEN(ISTA, 2) + AREA*CENTRD(2)
              STACEN(ISTA, 3) = STACEN(ISTA, 3) + AREA*CENTRD(3)
          ENDDO
C
C Find the centroid of the station
          IF (STATN(ISTA) .NE. 0.) THEN
              STACEN(ISTA, 1) = STACEN(ISTA, 1) / STATN(ISTA)
              STACEN(ISTA, 2) = STACEN(ISTA, 2) / STATN(ISTA)
              STACEN(ISTA, 3) = STACEN(ISTA, 3) / STATN(ISTA)
          ENDIF
      ENDDO

C
C Find the hull volume from the station areas using Simpson's
C Formula.
      SUM = 0.
      DO ISTA = 1, NSTATN-1
          IF (MOD(ISTA, 2) .EQ. 1) THEN
              SUM = SUM + 4.0 * STATN(ISTA)
          ELSE
              SUM = SUM + 2.0 * STATN(ISTA)
          ENDIF
      ENDDO
      SUM = SUM + STATN(NSTATN)
      VOLUME = SUM * 1.0 / 3.0

C
C Find the centroid of the hull
      CALL CTROID(18, STATN, STACEN, STATTL, CENTRD)

      RETURN
      END
C*********************************************************************
```

```
C ASUBTR
C
C 910813 BAP    Find the submerged volume and it's centroid
C*********************************************************************
      SUBROUTINE ASUBTR(A, B, C, AREA, CENTRD)
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      DOUBLE PRECISION A(3), B(3), C(3), AREA, CENTRD(3)

      DOUBLE PRECISION AB(3), BC(3), CA(3)
      LOGICAL ERRFLG
      DOUBLE PRECISION PART, CENPRT(3), TOTAL, CENTTL(3)


C
C There are eight possible cases:
C                          freq   status  centroid
C       7 a,b,c < z=0.   10689    done   done
C       6 a,b                0    done   done
C       5 a,  c              0    done   done
C       4 a                  0    done   done
C       3   b,c           2772    done   done
C       2   b             1634    done   done
C       1     c            399    done   done
C       0  none            760    done   done

      ICASE = 0
      IF (A(3) .LT. 0.) ICASE = ICASE + 4
      IF (B(3) .LT. 0.) ICASE = ICASE + 2
      IF (C(3) .LT. 0.) ICASE = ICASE + 1

      IF     (ICASE .EQ. 7) THEN
          CALL AREATR(A, B, C, AREA)
          CALL CENTTR(A, B, C, CENTRD)


C     C                 C is exposed, A and B are submerged.
C     **
C     B*A
      ELSEIF (ICASE .EQ. 6) THEN
          CALL AREATR(A, B, C, TOTAL)
C         Find the partial triangle
          CALL XSEGZ0(B, C, BC, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL XSEGZ0(C, A, CA, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL AREATR(C, BC, CA, PART)
          AREA = TOTAL - PART

          CALL CENTTR(C, BC, CA, CENPRT)
          CALL CENTTR(A, B, C, CENTTL)
          IF (AREA .NE. 0.) THEN
              CENTRD(1) = ( CENTTL(1)*TOTAL - CENPRT(1)*PART ) / AREA
              CENTRD(2) = ( CENTTL(2)*TOTAL - CENPRT(2)*PART ) / AREA
              CENTRD(3) = ( CENTTL(3)*TOTAL - CENPRT(3)*PART ) / AREA
          ENDIF
```

```
C     B                  B is exposed, A and C are submerged.
C     **
C     C*A
      ELSEIF (ICASE .EQ. 5) THEN
          CALL AREATR(A, B, C, TOTAL)
C         Find the partial triangle
          CALL XSEGZ0(B, C, BC, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL XSEGZ0(A, B, AB, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL AREATR(B, BC, AB, PART)
          AREA = TOTAL - PART

          CALL CENTTR(B, BC, AB, CENPRT)
          CALL CENTTR(A, B, C, CENTTL)
          IF (AREA .NE. 0.) THEN
              CENTRD(1) = ( CENTTL(1)*TOTAL - CENPRT(1)*PART ) / AREA
              CENTRD(2) = ( CENTTL(2)*TOTAL - CENPRT(2)*PART ) / AREA
              CENTRD(3) = ( CENTTL(3)*TOTAL - CENPRT(3)*PART ) / AREA
          ENDIF


C     C*B                B and C are exposed, A is submerged.
C     **
C     A
      ELSEIF (ICASE .EQ. 4) THEN
C         Find the partial triangle
          CALL XSEGZ0(A, B, AB, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL XSEGZ0(A, C, CA, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL AREATR(A, CA, AB, PART)
          AREA = PART
          CALL CENTTR(A, CA, AB, CENTRD)


C     A                  A is exposed, B and C are submerged.
C     **
C     B*C
      ELSEIF (ICASE .EQ. 3) THEN
          CALL AREATR(A, B, C, TOTAL)
C         Find the partial triangle
          CALL XSEGZ0(A, B, AB, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL XSEGZ0(C, A, CA, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL AREATR(A, AB, CA, PART)
          AREA = TOTAL - PART

          CALL CENTTR(A, AB, CA, CENPRT)
          CALL CENTTR(A, B, C, CENTTL)
          IF (AREA .NE. 0.) THEN
              CENTRD(1) = ( CENTTL(1)*TOTAL - CENPRT(1)*PART ) / AREA
              CENTRD(2) = ( CENTTL(2)*TOTAL - CENPRT(2)*PART ) / AREA
              CENTRD(3) = ( CENTTL(3)*TOTAL - CENPRT(3)*PART ) / AREA
          ENDIF


C     A*C                A and C are exposed, B is submerged.
C     **
C     B
      ELSEIF (ICASE .EQ. 2) THEN
C         Find the partial triangle
          CALL XSEGZ0(A, B, AB, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL XSEGZ0(B, C, BC, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL AREATR(AB, B, BC, PART)
          AREA = PART
          CALL CENTTR(AB, B, BC, CENTRD)


C     A                  A and B are exposed, C is submerged.
C     **
C     B *
C      **C
      ELSEIF (ICASE .EQ. 1) THEN
          CALL XSEGZ0(B, C, BC, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL XSEGZ0(C, A, CA, ERRFLG)
          IF (ERRFLG) THEN
                WRITE(6,*) 'ASUBTR PROGRAMMING ERROR'
                STOP
          ENDIF

          CALL AREATR(BC, C, CA, PART)
          AREA = PART
          CALL CENTTR(BC, C, CA, CENTRD)
```

```
      ELSEIF (ICASE .EQ. 0) THEN
          AREA = 0.
          CALL CENTTR(A, B, C, CENTRD)
      ENDIF

      RETURN
      END
```

```
C*********************************************************************
C REQSUB.f
C
C 911101 BAP    ADAMS REQUEST subroutine.
C*********************************************************************
      SUBROUTINE REQSUB( ID, TIME, PAR, NPAR, IFLAG, RESULT )
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      INTEGER           ID
      DOUBLE PRECISION  TIME
      DOUBLE PRECISION  PAR( * )
      INTEGER           NPAR
      LOGICAL           IFLAG
      DOUBLE PRECISION  RESULT(8)
C
C Argument list variable descriptions
C     ID        Identifier of calling SFORCE statement
C     TIME      Current time
C     PAR       Vector of passed statement parameters
C     NPAR      Number of passed parameters
C     IFLAG     Initialization pass flag
C     RESULT    Result array passed back to ADAMS
C
C Local variables
      CHARACTER*4       ACTION
      INTEGER           ERROR
      INTEGER           INIT
      CHARACTER*80      MESSGE
      DOUBLE PRECISION  SUM
      DOUBLE PRECISION  VECTOR(6)
C
C Saved variable list
      SAVE INIT
C
C Local variable desciptions
C     ACTION            Error stop action
C     ERROR             Error flag
C     INIT              Local initialization flag
C     MESSGE            Error message
C
C Local variable initialization
      DATA ERROR / 0 /
      DATA INIT  / 0 /
C
C Initialize local variables
      IF (INIT .EQ. 0) THEN
          INIT = 1
C         Initialize variable here
          IF (ERROR) THEN
              MESSGE = 'SFOSUB:  Initialization error'
              ACTION = 'STOP'
              CALL ERRMES(.TRUE., MESSGE, ID, ACTION)
          ENDIF
      ENDIF

C
C Sum up the forces for the Port Gunwhale
      SUM = 0.0
      DO IDIMKR=20001, 20009
          CALL INFO('FORC', IDIMKR, 3200, 3200, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          SUM = SUM + SQRT( VECTOR(1)*VECTOR(1) +
     1                      VECTOR(2)*VECTOR(2) +
     2                      VECTOR(3)*VECTOR(3) )
      ENDDO
      DO IDIMKR=200010, 200019
          CALL INFO('FORC', IDIMKR, 3200, 3200, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          SUM = SUM + SQRT( VECTOR(1)*VECTOR(1) +
     1                      VECTOR(2)*VECTOR(2) +
     2                      VECTOR(3)*VECTOR(3) )
      ENDDO
      RESULT(2) = SUM
C
C Sum up the forces for the Starboard Gunwhale
      SUM = 0.0
      DO IDIMKR=20001, 20009
          CALL INFO('FORC', IDIMKR, 3300, 3300, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          SUM = SUM + SQRT( VECTOR(1)*VECTOR(1) +
     1                      VECTOR(2)*VECTOR(2) +
     2                      VECTOR(3)*VECTOR(3) )
      ENDDO
      DO IDIMKR=200010, 200019
          CALL INFO('FORC', IDIMKR, 3300, 3300, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          SUM = SUM + SQRT( VECTOR(1)*VECTOR(1) +
     1                      VECTOR(2)*VECTOR(2) +
     2                      VECTOR(3)*VECTOR(3) )
      ENDDO
      RESULT(3) = SUM
C
C Sum up the forces for the Port Chine
      SUM = 0.0
      DO IDIMKR=20001, 20009
          CALL INFO('FORC', IDIMKR, 3400, 3400, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          SUM = SUM + SQRT( VECTOR(1)*VECTOR(1) +
     1                      VECTOR(2)*VECTOR(2) +
     2                      VECTOR(3)*VECTOR(3) )
      ENDDO
      DO IDIMKR=200010, 200019
          CALL INFO('FORC', IDIMKR, 3400, 3400, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          SUM = SUM + SQRT( VECTOR(1)*VECTOR(1) +
     1                      VECTOR(2)*VECTOR(2) +
     2                      VECTOR(3)*VECTOR(3) )
      ENDDO
      RESULT(4) = SUM
C
C Sum up all of the impact forces
      RESULT(6) = RESULT(2) + RESULT(3) + RESULT(4)
C
      RETURN
      END
```

```
C*************************************************************************
C SFMAIN.f
C 2 Aug 90
C B A Pendock
C
C Checking routine for SFOSUB
C*************************************************************************
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
C
C      INCLUDE 'TEST.com'
C*************************************************************************
C TEST.com
C 3 Aug 90
C B A Pendock
C
C Common block for testing user SFORCE routines.
C*************************************************************************
      COMMON /TEST/ ERROR
      INTEGER           ERROR
C
C Parameter definitions
      INTEGER           NPAR
      PARAMETER ( NPAR = 2 )
      PARAMETER ( NSFOID = 1 )
C     PARAMETER ( NSFOID = 6 )
C
      INTEGER           ID
      DOUBLE PRECISION  TIME
      DOUBLE PRECISION  PAR(NPAR)
      LOGICAL           DFLAG
      LOGICAL           IFLAG
      DOUBLE PRECISION  VALUE
C
C Here is a list of SFORCE ID's to try
      INTEGER           SFID(NSFOID)
      DOUBLE PRECISION  PAR1(NSFOID)
      DOUBLE PRECISION  PAR2(NSFOID)
      INTEGER           ISFID
      INTEGER           NSFID
C
C Argument list variable descriptions
C     ID        Identifier of calling SFORCE statement
C     TIME      Current time
C     PAR       Vector of passed statement parameters
C     NPAR      Number of passed parameters
C     DFLAG     Differencing flag
C     IFLAG     Initialization pass flag
C     VALUE     The SFORCE value returned to ADAMS
C
      DATA ID / 1 /
      DATA TIME / 0. /
      DATA DFLAG / .FALSE. /
      DATA NSFID /NSFOID/
c     DATA SFID / 1001,  1002,  1003,  1004,  1005,  1006 /
c     DATA PAR1/  1000,  1000,  1000,  1000,  1000,  1000 /
c     DATA PAR2/  1001,  1002,  1003,  1001,  1002,  1003  /
      DATA SFID / 2001 /
      DATA PAR1/  2000 /
      DATA PAR2/  2001 /
C
C Initialization
      IFLAG = .TRUE.
      ISFID = 0
   10 IF (ERROR .EQ. 0 .AND. ISFID .LT. NSFID) THEN
         ISFID = ISFID + 1
         ID    = SFID(ISFID)
         PAR(1) = PAR1(ISFID)
         PAR(2) = PAR2(ISFID)
         CALL SFOSUB( ID, TIME, PAR, NPAR, DFLAG, IFLAG, VALUE )
         IFLAG = .FALSE.
         GO TO 10
      ENDIF
C
C First time point
      IFLAG = .FALSE.
      ISFID = 0
   20 IF (ERROR .EQ. 0 .AND. ISFID .LT. NSFID) THEN
         ISFID = ISFID + 1
         ID = SFID(ISFID)
         CALL SFOSUB( ID, TIME, PAR, NPAR, DFLAG, IFLAG, VALUE )
         GO TO 20
      ENDIF
C
C Check the status
      WRITE(6,*) 'Run complete status =', ERROR
C
      STOP
      END

C*************************************************************************
C STUBS.f
C 2 Aug 90
C B A Pendock
C
C This file contains all of the stubs needed to resolve the link.  This
C file should not be used to generate production code.
C*************************************************************************
C
C*************************************************************************
C ERRMES
C 2 Aug 90
C B A Pendock
C
C Error message stub.
C*************************************************************************
      SUBROUTINE ERRMES(ERRFLG, MSG, ID, ACTION)
      LOGICAL           ERRFLG
      CHARACTER*80      MSG
      INTEGER           ID
      CHARACTER*4       ACTION
C
C     INCLUDE 'TEST.com'
C*************************************************************************
C TEST.com
C 3 Aug 90
C B A Pendock
C
C Common block for testing user SFORCE routines.
C*************************************************************************
      COMMON /TEST/ ERROR
      INTEGER           ERROR
C
      WRITE(6,*) 'ERRMES STUB CALLED'
      WRITE(6,*) 'ERRFLG =', ERRFLG
      WRITE(6,*) 'MSG    =', MSG
      WRITE(6,*) 'ID     =', ID
      WRITE(6,*) 'ACTION =', ACTION
C
```

```
      IF (ERRFLG) THEN
          ERROR = 1
      ENDIF
C
      RETURN
      END
C*********************************************************************
C FNCDEP
C 10 Aug 90
C B A Pendock
C
C Functional dependency stub.
C*********************************************************************
      SUBROUTINE FNCDEP(SUBNAM, VARNAM, ID, ARRAY, N, ERRFLG)
      CHARACTER*6       SUBNAM
      CHARACTER*6       VARNAM
      INTEGER           ID
      DOUBLE PRECISION ARRAY(*)
      INTEGER           N
      LOGICAL           ERRFLG
C
      WRITE(6,*) 'FNCDEP STUB CALLED'
      WRITE(6,*) 'SUBNAM=', SUBNAM, ', VARNAM=', VARNAM, ', ID=', ID
      IF (N .GT. 0) THEN
          WRITE(6,'(6I10)') (INT(ARRAY(I)) , I=1, N)
      ENDIF
C
      ERRFLG = .FALSE.
C
      RETURN
      END
C*********************************************************************
C INFO
C 14 Aug 90
C B A Pendock
C
C Info stub.
C*********************************************************************
      SUBROUTINE INFO(TYPE, IDIMKR, IDJMKR, IDRMKR, ARRAY, ERRFLG)
      CHARACTER*4       TYPE
      INTEGER           IDIMKR
      INTEGER           IDJMKR
      INTEGER           IDRMKR
      DOUBLE PRECISION ARRAY(6)
      LOGICAL           ERRFLG
C
      WRITE(6,910) 'INFO stub called', TYPE, IDIMKR, IDJMKR, IDRMKR
  910 FORMAT(1x, a16, '  type=', a4, ', i=', i6,', j=', i6,', r=', i6)
      DO 10 I = 1, 6
          ARRAY(I) = 0.
   10 CONTINUE
      ERRFLG = .FALSE.
C
      RETURN
      END
C*********************************************************************
C RCNVRT
C 6 Sep 90
C B A Pendock
C
C Stub for subroutine that converts angles.
C*********************************************************************
      SUBROUTINE RCNVRT(SYS1, COORD1, SYS2, COORD2, ISTAT)
      CHARACTER*7       SYS1
      DOUBLE PRECISION COORD1(*)
      CHARACTER*7       SYS2
      DOUBLE PRECISION COORD2(*)
      INTEGER           ISTAT
C
      WRITE(6,910) 'RCNVRT stub called', SYS1, (COORD1(I), I=1,3),
     &                                   SYS2, (COORD2(I), I=1,3), ISTAT
  910 FORMAT(1x, a18, '  SYS1=', a7, ', COORD1=', 3F10.4, ','
     &        /, 21x,   'SYS2=', a7, ', COORD2=', 3F10.4, ','
     &        /, 21x,   'ISTAT=', I3)
      DO 10 I = 1, 3
          COORD2(I) = 0.
   10 CONTINUE
      ISTAT = 0
C
      RETURN
      END
```

```
C*********************************************************************
C SFOSUB.f
C
C 91080 BAP     ADAMS SFORCE subroutine.
C*********************************************************************
      SUBROUTINE SFOSUB( ID, TIME, PAR, NPAR, DFLAG, IFLAG, VALUE )
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      INTEGER           ID
      DOUBLE PRECISION  TIME
      DOUBLE PRECISION  PAR( * )
      INTEGER           NPAR
      LOGICAL           DFLAG
      LOGICAL           IFLAG
      DOUBLE PRECISION  VALUE
C
C Argument list variable descriptions
C     ID        Identifier of calling SFORCE statement
C     TIME      Current time
C     PAR       Vector of passed statement parameters
C     NPAR      Number of passed parameters
C     DFLAG     Differencing flag
C     IFLAG     Initialization pass flag
C     VALUE     The SFORCE value returned to ADAMS
C
C Local variables
      CHARACTER*4       ACTION
      INTEGER           ERROR
      INTEGER           INIT
      CHARACTER*80      MESSGE
      INTEGER           SUBID
      INTEGER           SFSUB
C
C Saved variable list
      SAVE INIT
C
C Local variable desciptions
C     ACTION            Error stop action
C     ERROR             Error flag
C     INIT              Local initialization flag
C     MESSGE            Error message
C     SUBID             Code for which subroutine should be called.
C                       0 - Unknown
C                       1 - H2OSTA  Hydro-static forces
C                       2 - H2ODYN  Hydro-dynamic forces
C                       3 - CRASH   Impact forces
C
C Local variable initialization
      DATA ERROR / 0 /
      DATA INIT  / 0 /
C
C Initialize local variables
      IF (INIT .EQ. 0) THEN
          INIT = 1
C         Initialize variable here
          IF (ERROR) THEN
              MESSGE = 'SFOSUB:  Initialization error'
              ACTION = 'STOP'
              CALL ERRMES(.TRUE., MESSGE, ID, ACTION)
          ENDIF
      ENDIF
C
C Primary routing
      SUBID = SFSUB(ID)
C
C The SFORCE was not identified
      IF (SUBID .EQ. 0) THEN
          MESSGE = 'SFOSUB:  Unknown SFORCE ID'
          ACTION = 'STOP'
          CALL ERRMES(.TRUE., MESSGE, ID, ACTION)
C
C Call the hydro-statics routine
      ELSEIF (SUBID .EQ. 1) THEN
          CALL H2OSTA(ID, TIME, PAR, NPAR, IFLAG, VALUE)
C
C Call the hydro-dynamics routine
      ELSEIF (SUBID .EQ. 2) THEN
          CALL H2ODYN(ID, TIME, PAR, NPAR, DFLAG, IFLAG, VALUE)
C
C Call the crash routine
      ELSEIF (SUBID .EQ. 3) THEN
          CALL CRASH(ID, TIME, PAR, NPAR, DFLAG, IFLAG, VALUE)
      ENDIF
C
      RETURN
      END
C*********************************************************************
C SFSUB
C
C 910808 BAP    Find the function that needs to be called for the
C               given SFORCE.
C                       0 - Unknown
C                       1 - H2OSTA  Hydro-static forces
C                       2 - H2ODYN  Hydro-dynamic forces
C                       3 - CRASH   Impact forces
C*********************************************************************
      INTEGER FUNCTION SFSUB(ID)
      INTEGER           ID
C
      IF (ID .EQ. 2001 .OR. ID .EQ. 3001 .OR.
     2    ID .EQ. 2002 .OR. ID .EQ. 3002 .OR.
     3    ID .EQ. 2003 .OR. ID .EQ. 3003 .OR.
     4    ID .EQ. 2004 .OR. ID .EQ. 3004 .OR.
     5    ID .EQ. 2005 .OR. ID .EQ. 3005 .OR.
     6    ID .EQ. 2006 .OR. ID .EQ. 3006     ) THEN
          SFSUB = 1
      ELSE IF (ID .EQ. 2101 .OR.
     2         ID .EQ. 2102 .OR.
     3         ID .EQ. 2103 .OR.
     4         ID .EQ. 2104 .OR.
     5         ID .EQ. 2105 .OR.
     6         ID .EQ. 2106     ) THEN
          SFSUB = 2
      ELSE IF (ID .GE. 3200 .AND. ID .LE. 3220 .OR.
     2         ID .GE. 3300 .AND. ID .LE. 3320 .OR.
     3         ID .GE. 3400 .AND. ID .LE. 3420     ) THEN
          SFSUB = 3
      ELSE
          SFSUB = 0
      ENDIF
C
      RETURN
      END
C*********************************************************************
C H2OSTA
C
C 910808 BAP    Find the hydro-static forces.
C*********************************************************************
      SUBROUTINE H2OSTA(ID, TIME, PAR, NPAR, IFLAG, VALUE)
```

```
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      INTEGER          ID
      DOUBLE PRECISION TIME
      DOUBLE PRECISION PAR( * )
      INTEGER          NPAR
      DOUBLE PRECISION VALUE

      CHARACTER*4      ACTSTP
      DOUBLE PRECISION ARM(3)
      DOUBLE PRECISION BUO(3)
      DOUBLE PRECISION CENTRD(3)
      DOUBLE PRECISION CENMAS(3)
      DOUBLE PRECISION CMREF(3)
      DOUBLE PRECISION NEWCM(3)
      LOGICAL          ERRFLG
      INTEGER          IDIMKR, IDJMKR, IDRMKR
      INTEGER          INIT
      CHARACTER*80     MESSGE
      DOUBLE PRECISION TRQ(3)
      DOUBLE PRECISION REF(3)
      DOUBLE PRECISION VECTOR(6)

      DOUBLE PRECISION WTKEEL, WTBEAM, LTAREA
      DATA ACTSTP /'STOP'/

      SAVE

C     WRITE(6,*) 'H2OSTA CALLED'
C     WRITE(6,*) 'ID=', ID
C     WRITE(6,*) 'PAR=', PAR(1), PAR(2)
C     WRITE(6,*) 'NPAR=', NPAR

C
C Check for the correct number of parameters.
      IF (NPAR .NE. 5) THEN
          ERRFLG = .TRUE.
          MESSGE = 'WRONG NUMBER OF PARAMETERS TO H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
      ENDIF

      IDIMKR = PAR(1)
      IDJMKR = PAR(2)
      IDRMKR = PAR(2)
      REF(1) = PAR(3)
      REF(2) = PAR(4)
      REF(3) = PAR(5)

      IF (IFLAG) THEN
      ELSE
C
C Get the mass center current position
          CALL INFO('DISP', IDIMKR, 100, 100, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2OSTA'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
C
C Save the current mass center
          NEWCM(1) = VECTOR(1)
          NEWCM(2) = VECTOR(2)
          NEWCM(3) = VECTOR(3)
C
C Use the hullgm routine to find submerged volume and its centroid
          CALL HULLGM(REF, VECTOR, VOLUME, CENTRD, WTKEEL, WTBEAM,
     2         LTAREA, ERRFLG)
C
C Find the force
C freshwater = 62.4
C seawater = 64.0

          BUO(1) = 0.
          BUO(2) = 0.
          BUO(3) = volume * 64.0

C
C Find the torques in the boat frame
          IF     (ID .EQ. 2001 .OR. ID .EQ. 3001) THEN
              VALUE = BUO(3)
          ELSEIF (ID .EQ. 2004 .OR. ID .EQ. 3004) THEN
              CALL VDIF(CENTRD, NEWCM, ARM)
              CALL VCRS(ARM, BUO, TRQ)
              VALUE = TRQ(1)
          ELSEIF (ID .EQ. 2005 .OR. ID .EQ. 3005) THEN
              CALL VDIF(CENTRD, NEWCM, ARM)
              CALL VCRS(ARM, BUO, TRQ)
              VALUE = TRQ(2)
          ELSE
              WRITE(6,*) 'UNKNOWN ID', ID
          ENDIF
      ENDIF

      RETURN
      END
C*************************************************************************
C H2ODYN
C
C 910829 BAP    Find the hydro-dynamic forces.
C*************************************************************************
      SUBROUTINE H2ODYN(ID, TIME, PAR, NPAR, DFLAG, IFLAG, VALUE)
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      INTEGER          ID
      DOUBLE PRECISION TIME
      DOUBLE PRECISION PAR( * )
      INTEGER          NPAR
      LOGICAL          DFLAG
      LOGICAL          IFLAG
      DOUBLE PRECISION VALUE

      CHARACTER*4      ACTSTP
      LOGICAL          ERRFLG
      CHARACTER*80     MESSGE
      DOUBLE PRECISION CENTRD(3)
      DOUBLE PRECISION REF(3)
      DOUBLE PRECISION G, RHO, B, V, T, LAMBDA, BETA
      DOUBLE PRECISION WTKEEL, WTBEAM, LTAREA
      DOUBLE PRECISION VECTOR(6)

      DOUBLE PRECISION EA(3), YPR(3)
      INTEGER          ISTAT

      DATA ACTSTP /'STOP'/

c      WRITE(6,*) 'H2ODYN CALLED'
c      write(6,*) '  id=', id
c      write(6,*) '  npar=', npar
c      write(6,*) '  par=', (par(i), i=1, npar)
c      write(6,*) '  dflag=', dflag
c      write(6,*) '  iflag=', iflag

      IF (IFLAG) THEN
```

```
      ELSE
C
C Find the dynamic lift ...

C
C Check for the correct number of parameters.
      IF (NPAR .NE. 10) THEN
          ERRFLG = .TRUE.
          MESSGE = 'WRONG NUMBER OF PARAMETERS TO H2ODYN'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
      ENDIF

          G      = 32.2
          RHO    = 1.9384
          REF(1) = PAR(3)
          REF(2) = PAR(4)
          REF(3) = PAR(5)
          B      = PAR(6)
          V      = PAR(7)
          T      = PAR(8)
c          LAMBDA = PAR(9)
          BETA   = PAR(10)

C
C Find an instantaneous lambda.
          IDIMKR = PAR(1)
C
C Get the mass center current position
          CALL INFO('DISP', IDIMKR, 100, 100, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM H2ODYN'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
C
C Use the hullgm routine to find submerged volume and its centroid
          CALL HULLGM(REF, VECTOR, VOLUME, CENTRD, WTKEEL, WTBEAM,
     2                LTAREA, ERRFLG)
          lambda = wtkeel / wtbeam
c         write(6,*) 'new lamda =', wtkeel/wtbeam

C
C Find the instantaneous trim angle
C
C Note:  This code needs more work.  The trim angle code works
C        okay but the rest of the system prevents the bow from
C        coming up, so that the system can't get started.  For
C        now, let the trim angle stay an input.
C          CALL V3LOAD(VECTOR(4), VECTOR(5), VECTOR(6), EA)
C          CALL RCNVRT('EULER', EA, 'YPR', YPR, ISTAT)
C          IF (ISTAT .NE. 0) THEN
C              ERRFLG = .TRUE.
C              MESSGE = 'ERROR CALLING RCNVRT FROM H2ODYN'
C              CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
C          ENDIF
C          IF (YPR(2) .LT. 0.) THEN
C              T = - YPR(2) * 180. / 3.1415
C          ELSE
C              T = 0.
C          ENDIF
C
C Use a minimum trim angle to get the bow up.
C          IF (T .LT. 2.0) THEN
C              T = 2.0
C          ENDIF
C          write(6,*) 'pitch,t=', ypr(2), t

C 1. Cv
          CV = V / (G * B) ** 0.5

C 2. Clo
          CLO = T**1.1 *
     2          (0.012*LAMBDA**0.5 + 0.0055*LAMBDA**2.5 / CV**2.)

C 3. Clb
          CLB = CLO - 0.0065*BETA*CLO**0.60

C 4. delta d
          DELTAD = 0.5 * RHO * V*V * B*B * CLO * CLB

          IF (ID .EQ. 2103) THEN
              VALUE = DELTAD
          ELSE IF (ID .EQ. 2105) THEN
C
C Find the center of dynamic lift forward of the transom
              CP = 0.75 - 1. / ( 5.21 * CV**2 / LAMBDA**2 + 2.39)
              CENTER = CP * B * LAMBDA
C
C Find the torque.  The CM is 11.511' from the bow.  The
C transom is 18' from the bow.  So the CM is 6.489 ahead of the
C transom.
C New CM at ref(1), ref(2), ref(3)
              VALUE = (CENTER - (18.0 - ref(1)) ) * DELTAD
          ELSE
              VALUE = 0.
          ENDIF
      ENDIF
      RETURN
      END
C*********************************************************************
C CRASH
C
C 910903 BAP    Find the impact forces.
C*********************************************************************
      SUBROUTINE CRASH(ID, TIME, PAR, NPAR, DFLAG, IFLAG, VALUE)
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      INTEGER           ID
      DOUBLE PRECISION TIME
      DOUBLE PRECISION PAR( * )
      INTEGER           NPAR
      LOGICAL           DFLAG
      LOGICAL           IFLAG
      DOUBLE PRECISION VALUE

      CHARACTER*4       ACTSTP
      DOUBLE PRECISION CMAX
      DOUBLE PRECISION D
      DOUBLE PRECISION DIFF(3)
      DOUBLE PRECISION E
      LOGICAL           ERRFLG
      DOUBLE PRECISION FBREAK
      DOUBLE PRECISION FMAG(3)
      LOGICAL           IBREAK, ibmsg
      INTEGER           IDIMKR, IDJMKR, IDRMKR
      integer           init
      INTEGER           IORD
      DOUBLE PRECISION K
      CHARACTER*80      MESSGE
      DOUBLE PRECISION VECTOR(6)
      DOUBLE PRECISION X, XD, X1
```

```
C
C Saved variable list
      SAVE IBREAK, init, ibmsg

      DATA ACTSTP /'STOP'/
      DATA IBREAK /.FALSE./
      data ibmsg  /.false./

      IDIMKR = PAR(1)
      IDJMKR = PAR(2)
      X1     = PAR(3)
      K      = PAR(4)
      E      = PAR(5)
      CMAX   = PAR(6)
      D      = PAR(7)
      FBREAK = PAR(8)



      IF (IFLAG) THEN
          VALUE = 0.
      ELSE
C
C Find the distance from the i and j markers.
C Ignore the y distance
          CALL INFO('DISP', IDIMKR, IDJMKR, 100, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM CRASH'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          DIFF(1) = VECTOR(1)
          DIFF(2) = 0.
          DIFF(3) = VECTOR(3)

          X = VLEN(DIFF)
c
c If the bow of the bullet boat is more than 5 ft away from the target
c boat in the x direction, return zero forces.
       if ( diff(1) .gt. 5 ) then

          VALUE = 0.
       else
C
C Find the velocity from the i and j markers.
C Ignore the y distance
          CALL INFO('VEL ', IDIMKR, IDJMKR, 100, VECTOR, ERRFLG)
          MESSGE = 'ERROR CALLING INFO FROM CRASH'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
          DIFF(1) = VECTOR(1)
          DIFF(2) = 0.
          DIFF(3) = VECTOR(3)

          XD = -VLEN(DIFF)
C
C Find the impact force...
          IORD = 0

          CALL IMPACT(X, XD, X1, K, E, CMAX, D, IORD, FMAG, ERRFLG)
          MESSGE = 'ERROR CALLING IMPACT FROM CRASH'
          CALL ERRMES ( ERRFLG, MESSGE, ID, ACTSTP)
C
C Check for exceeding the breaking point.
          IF (ID .GE. 3200 .AND. ID .LE. 3220) THEN
              IF (FMAG(1) .GT. FBREAK) THEN
                  IBREAK = .TRUE.
              ENDIF
              IF (IBREAK) THEN
                  FMAG(1) = 0.
              ENDIF
          ENDIF

          VALUE = FMAG(1)
      ENDIF
      ENDIF

      if (ibreak .and. (ibmsg .eq. .false.)) then
          write(6,*) 'broken id, time=', id, time
          ibmsg = .true.
      endif

      RETURN
      END
```

```
C*************************************************************************
C AREATR
C
C 910813 BAP    Find the area of a triangle in three space.
C*************************************************************************
      SUBROUTINE AREATR(VA, VB, VC, AREA)
      DOUBLE PRECISION VA(3), VB(3), VC(3), AREA

      DOUBLE PRECISION A(3), B(3), C(3)
      DOUBLE PRECISION S, SA, SB, SC
C
C Find the sides of the triangle
      CALL VDIF(VA, VB, A)
      CALL VDIF(VB, VC, B)
      CALL VDIF(VC, VA, C)
C
C Find the length of the sides
      SA = VLEN(A)
      SB = VLEN(B)
      SC = VLEN(C)
C
C Find the circumference of the triangle
      S = 0.5 * ( SA + SB + SC)
C
C Find the area of the triangle
      AREA = SQRT( S * (S - SA) * (S - SB) * (S - SC) )

      RETURN
      END
C*************************************************************************
C CENTTR
C
C 910816 BAP    Find the centroid of a triangle in three space.
C*************************************************************************
      SUBROUTINE CENTTR(A, B, C, CENTER)
      DOUBLE PRECISION A(3), B(3), C(3), CENTER(3)

      DO I = 1, 3
          CENTER(I) = ( A(I) + B(I) + C(I) ) / 3.
      ENDDO

      RETURN
      END
C*************************************************************************
C CTROID
C
C 910816 BAP    Find the moment of a system in three space.
C*************************************************************************
      SUBROUTINE CTROID(N, AREA, V, TOTAL, CENTER)
      INTEGER N
      DOUBLE PRECISION AREA(N), V(N, 3), TOTAL, CENTER(3)

      DOUBLE PRECISION SUM

      TOTAL = 0.
      DO I = 1, N
          TOTAL = TOTAL + AREA(I)
      ENDDO

      IF (TOTAL .NE. 0.) THEN
          DO IAXIS = 1, 3
              SUM = 0.
              DO I = 1, N
                  SUM = SUM + AREA(I) * V(I, IAXIS)
              ENDDO
              CENTER(IAXIS) = SUM / TOTAL
          ENDDO
      ENDIF

      RETURN
      END
C*************************************************************************
C MPRINT
C
C 910811 BAP    Print a 4x4 matrix.
C*************************************************************************
      SUBROUTINE MPRINT(M)
      DOUBLE PRECISION M(4,4)

      DO I=1,4
          WRITE(6,'(1X, 4F10.4)') (M(I,J), J=1,4)
      ENDDO

      RETURN
      END
C*************************************************************************
C MCOPY
C
C 910811 BAP    Copy a 4x4 matrix.
C*************************************************************************
      SUBROUTINE MCOPY(DEST, SRC)
      DOUBLE PRECISION DEST(4,4), SRC(4,4)

      DO I=1,4
          DO J=1,4
              DEST(I,J) = SRC(I,J)
          ENDDO
      ENDDO

      RETURN
      END
C*************************************************************************
C MIDENT
C
C 910811 BAP    Print a 4x4 matrix.
C*************************************************************************
      SUBROUTINE MIDENT(M)
      DOUBLE PRECISION M(4,4)

      DO I=1,4
          DO J=1,4
              IF (I .EQ. J) THEN
                  M(I,J) = 1.0
              ELSE
                  M(I,J) = 0.0
              ENDIF
          ENDDO
      ENDDO

      RETURN
      END
C*************************************************************************
C MMUL
C
C 910811 BAP    Multiple two 4x4 matrices.
C*************************************************************************
      SUBROUTINE MMUL(A, B)
      DOUBLE PRECISION A(4,4), B(4,4)
```

```
      DOUBLE PRECISION C(4,4)
      DOUBLE PRECISION R

      DO I=1,4
          DO J=1,4
              R = 0.0
              DO K=1,4
                  R = R + A(I, K) * B(K, J)
              ENDDO
              C(I,J) = R
          ENDDO
      ENDDO

      CALL MCOPY(B, C)

      RETURN
      END
C*********************************************************************
C MROTAT
C
C 910811 BAP    Form a rotation matrix.
C*********************************************************************
      SUBROUTINE MROTAT(T, A, M)
      DOUBLE PRECISION T
      CHARACTER*1 A
      DOUBLE PRECISION M(4,4)

      DOUBLE PRECISION CT
      DOUBLE PRECISION R(4,4)
      DOUBLE PRECISION ST

      CT = COS(T)
      ST = SIN(T)

      CALL MIDENT(R)

      IF      (A .EQ. 'X' .OR. A .EQ. 'x') THEN
          R(2,2) = CT
          R(2,3) = ST
          R(3,2) = -ST
          R(3,3) = CT
      ELSEIF (A .EQ. 'Y' .OR. A .EQ. 'y') THEN
          R(1,1) = CT
          R(1,3) = -ST
          R(3,1) = ST
          R(3,3) = CT
      ELSEIF (A .EQ. 'Z' .OR. A .EQ. 'z') THEN
          R(1,1) = CT
          R(1,2) = ST
          R(2,1) = -ST
          R(2,2) = CT
      ELSE
          WRITE(6,*) 'MROTAT:  BAD AXIS ',A
      ENDIF

      CALL MMUL(R, M)

      RETURN
      END
C*********************************************************************
C MTRANS
C
C 910811 BAP    Form a translation matrix.
C*********************************************************************
      SUBROUTINE MTRANS(X, Y, Z, M)
      DOUBLE PRECISION X, Y, Z
      DOUBLE PRECISION M(4,4)

      DOUBLE PRECISION R(4,4)

      CALL MIDENT(R)

      R(4,1) = X
      R(4,2) = Y
      R(4,3) = Z

      CALL MMUL(R, M)

      RETURN
      END
C*********************************************************************
C MMUL_P
C
C 910811 BAP    Multiple 1x4 matrix by a 4x4 matrix.
C*********************************************************************
      SUBROUTINE MMUL_P(P, M)
      DOUBLE PRECISION P(4), M(4,4)

      DOUBLE PRECISION C(4)
      DOUBLE PRECISION R

      DO J=1,4
          R = 0.0
          DO K=1,4
              R = R + P(K) * M(K, J)
          ENDDO
          C(J) = R
      ENDDO

      DO J=1,4
          P(J) = C(J)
      ENDDO

      RETURN
      END
C*********************************************************************
C M4LOAD
C
C 910811 BAP    Load a 1x4 matrix.
C*********************************************************************
      SUBROUTINE M4LOAD(X, Y, Z, M4)
      DOUBLE PRECISION X, Y, Z, M4(4)

      M4(1) = X
      M4(2) = Y
      M4(3) = Z
      M4(4) = 1.0

      RETURN
      END
C*********************************************************************
C M4GET
C
C 910811 BAP    Get a 1x4 matrix.
C*********************************************************************
      SUBROUTINE M4GET(X, Y, Z, M4)
      DOUBLE PRECISION X, Y, Z, M4(4)
```

```
      X = M4(1)
      Y = M4(2)
      Z = M4(3)

      RETURN
      END
C*********************************************************************
C VDIF
C
C 910813 BAP    Vector difference.
C*********************************************************************
      SUBROUTINE VDIF(A, B, C)
      DOUBLE PRECISION A(3), B(3), C(3)

      C(1) = A(1) - B(1)
      C(2) = A(2) - B(2)
      C(3) = A(3) - B(3)

      RETURN
      END
C*********************************************************************
C VSUM
C
C 910813 BAP    Vector sum.
C*********************************************************************
      SUBROUTINE VSUM(A, B, C)
      DOUBLE PRECISION A(3), B(3), C(3)

      C(1) = A(1) + B(1)
      C(2) = A(2) + B(2)
      C(3) = A(3) + B(3)

      RETURN
      END
C*********************************************************************
C VCOP
C
C 910813 BAP    Vector copy.
C*********************************************************************
      SUBROUTINE VCOP(A, B)
      DOUBLE PRECISION A(3), B(3)

      A(1) = B(1)
      A(2) = B(2)
      A(3) = B(3)

      RETURN
      END
C*********************************************************************
C VCRS
C
C 910813 BAP    Vector cross product.
C*********************************************************************
      SUBROUTINE VCRS(A, B, C)
      DOUBLE PRECISION A(3), B(3), C(3)

      C(1) = A(2) * B(3) - B(2) * A(3)
      C(2) = A(3) * B(1) - B(3) * A(1)
      C(3) = A(1) * B(2) - B(1) * A(2)

      RETURN
      END
C*********************************************************************
C VNORM
C
C 910813 BAP    Vector normalize.
C*********************************************************************
      SUBROUTINE VNORM(A)
      DOUBLE PRECISION A(3)

      DOUBLE PRECISION MAG

      MAG = SQRT( A(1)*A(1) + A(2)*A(2) + A(3)*A(3) )
      IF (MAG .GT. 0.) THEN
          A(1) = A(1) / MAG
          A(2) = A(2) / MAG
          A(3) = A(3) / MAG
      ELSE
          WRITE(6,*) 'VNORM:  VECTOR HAS ZERO MAGNITUDE'
      ENDIF

      RETURN
      END
C*********************************************************************
C VLEN
C
C 910813 BAP    Vector length.
C*********************************************************************
      FUNCTION VLEN(A)
      DOUBLE PRECISION A(3)

      VLEN = SQRT( A(1)*A(1) + A(2)*A(2) + A(3)*A(3) )

      RETURN
      END
C*********************************************************************
C V3LOAD
C
C 910813 BAP    Load a three dimensional vector.
C*********************************************************************
      SUBROUTINE V3LOAD(X, Y, Z, V3)
      DOUBLE PRECISION X, Y, Z, V3(3)

      V3(1) = X
      V3(2) = Y
      V3(3) = Z

      RETURN
      END
C*********************************************************************
C V3GET
C
C 910813 BAP    Get a three dimensional vector.
C*********************************************************************
      SUBROUTINE V3GET(X, Y, Z, V3)
      DOUBLE PRECISION X, Y, Z, V3(3)

      X = V3(1)
      Y = V3(2)
      Z = V3(3)

      RETURN
      END
C*********************************************************************
C XFORM
C
C 910811 BAP    Tranform the geometry list.
```

```
C*********************************************************************
      SUBROUTINE XFORM(ARYINI, A, NPTS, VECTOR, ERRFLG)
      IMPLICIT DOUBLE PRECISION (A-H, O-Z)
      DOUBLE PRECISION ARYINI(NPTS, 3)
      DOUBLE PRECISION A(NPTS, 3)
      DOUBLE PRECISION VECTOR(6)
      LOGICAL          ERRFLG

      DOUBLE PRECISION M4(4)
      DOUBLE PRECISION MAT(4,4)

C
C Copy the array
      DO I = 1, NPTS
          A(I, 1) = ARYINI(I,1)
          A(I, 2) = ARYINI(I,2)
          A(I, 3) = ARYINI(I,3)
      ENDDO
C
C Build the transformation matrix
C
C Initialize the matrix
      CALL MIDENT(MAT)
C
C Translate
      IF (VECTOR(1) .NE. 0. .OR.
     1    VECTOR(2) .NE. 0. .OR.
     2    VECTOR(3) .NE. 0. ) THEN

          CALL MTRANS(VECTOR(1), VECTOR(2), VECTOR(3), MAT)
      ENDIF
C
C Rotate Z
      IF (VECTOR(4) .NE. 0.) THEN
          CALL MROTAT(VECTOR(4), 'Z', MAT)
      ENDIF
C
C Rotate X
      IF (VECTOR(5) .NE. 0.) THEN
          CALL MROTAT(VECTOR(5), 'X', MAT)
      ENDIF
C
C Rotate Z
      IF (VECTOR(6) .NE. 0.) THEN
          CALL MROTAT(VECTOR(6), 'Z', MAT)
      ENDIF
C
C Transform each of the points
      DO I = 1, NPTS
          CALL M4LOAD(A(I,1), A(I,2), A(I,3), M4)
          CALL MMUL_P(M4, MAT)
          CALL M4GET(A(I,1), A(I,2), A(I,3), M4)
      ENDDO

      RETURN
      END
C*********************************************************************
C XSEGZ0
C
C 910814 BAP    Find the intersection of the z=0. plane and a line
C               segment
C*********************************************************************
      SUBROUTINE XSEGZ0(A, B, C, ERRFLG)
      DOUBLE PRECISION A(3), B(3), C(3)
      LOGICAL ERRFLG

      DOUBLE PRECISION M(3), T

      ERRFLG = .FALSE.
C
C Find the vector difference
      CALL VDIF(A, B, M)

      IF (M(3) .NE. 0.) THEN
C
C Find the unique intersection point of the line passing through
C AB and the z=0. plane.
          T = - A(3) / M(3)
          C(1) = M(1) * T + A(1)
          C(2) = M(2) * T + A(2)
          C(3) = M(3) * T + A(3)
      ELSE
          IF ( (A(1) .EQ. B(1)) .AND.
     1         (A(2) .EQ. B(2)) .AND.
     2         (A(3) .EQ. B(3)) .AND.
     3         (A(3) .EQ. 0.  ) ) THEN
C
C If the two points are identical and at z=0. then there is a
C unique solution.  Leave the error flag false.
          ELSE
C
C The line segment AB is parallel to the z=0. plane and there is
C either no solution or an infinite number of solutions.
              ERRFLG = .TRUE.
          ENDIF
          C(1) = A(1)
          C(2) = A(2)
          C(3) = A(3)
      ENDIF

      RETURN
      END
```

APPENDIX C

ADAMS - Data Set for the 30 MPH Collision

```
Boat 30 mph

! boat.adm
!
! 910808 BAP    Simple boat model for testing the SFOSUB.
!
!
!  1 mph = 1.4667 fps

!  5 mph = 7.3 fps
! 10 mph = 14.7 fps
! 15 mph = 22.0 fps
! 20 mph = 29.3 fps
! 25 mph = 36.7 fps
! 30 mph = 44.0 fps

! static, t=0.0, CM  = 11.770, 0., 0.75
! static, t=0.0, ref = 11.770, 0., 2.00
!  5 mph, t=0.0, ref = 11.770
! 10 mph, t=9.5, ref = 14.150
! 15 mph, t=6.9, ref = 13.520
! 20 mph, t=5.2, ref = 13.100
! 25 mph, t=5.0, ref = 12.950
! 30 mph, t=5.0, ref = 12.850

! Hull reference frame has the keel at x=0, y=0 and z=0.
! To move the CM within the boat, move the CM and ref.
! To move the entire boat, move the CM, and graphics reference.
!
! Changing speeds involves moving the CM within the boat and moving
! the entire boat.
!
! It takes about 3 sec for the boat to trim.

output/ grsave, reqsave, ypr

accgrav/ gc=32.2, kgrav=-32.2

gstiff/ err=.001

! ground (water)
part/100, ground
   marker/100
   gr/100, cir, cm=100, rad=200

! boat
part/200, cm=200, ma=4868, ip=50000,156000,156000
, vx= -44.0, wy=.001
   marker/200    , qp=132.850, 0.0, 0.75
   marker/201    , qp=120.000, 0.0, -1.25            ! graphics file ref
   marker/200100 , qp=132.850, 0.0, 0.75
   marker/100200 , qp=132.850, 0.0, 0.75, pa=100

   marker/1002001, pa=100                            ! bouyancy
   marker/1002004, reu= 90D,  90D, 0, pa=100
   marker/1002005, reu=   0, -90D, 0, pa=100

   marker/1002102, reu=   0, -90D, 0, pa=100         ! dynamic lift
   marker/1002103, pa=100

   marker/1002202, reu=   0, -90D, 0, pa=100         ! outboard


! constrain boats to 3 dof
jo/100, plan, i=102, j=202
  ma/102, pa=100, qp=132.850, 0.0, 0.75
, reu=0,90d,0
  ma/202, pa=200, qp=132.850, 0.0, 0.75
, reu=0,90d,0

! guess at the damping
   bushing/200, i=200, j=100
,  c=   0, 100, 1000
!     fore, lat, vert
, ct=  10000, 100000, 100000
!       roll,  pitch, yaw

! buoyancy
   sfo/2001, i=200100, j=1002001, tra, action
,    fu=-user(200100, 100200, 12.850, 0., 2.00)
!             ^ boat cm
!                        ^ boat cm reference on ground
   sfo/2004, i=200100, j=1002004, rot, action
,    fu= user(200100, 100200, 12.850, 0., 2.00)
   sfo/2005, i=200100, j=1002005, rot, action
,    fu= user(200100, 100200, 12.850, 0., 2.00)


! dynamic lift
!
!     b     est 3.1      beam at waterline
!     v     -7.333       forward velocity in f/s
!     t     0            trim angle in radians
!     lamda est 5.161    wetted keel len / wetted beam len
! Note:  currently lamba is not used.
!     beta  0.1686 18'   dead rise angle in radians
!                              b,      v,     t, lamda,  beta
!,   fu=user(200100, 100200, 5.876,   -7.3, 0.0, 1.673, 9.658) !  5 mph
!,   fu=user(200100, 100200, 5.876,  -14.7, 9.5, 1.673, 9.658) ! 10 mph
!,   fu=user(200100, 100200, 5.876,  -22.0, 6.9, 1.673, 9.658) ! 15 mph
!,   fu=user(200100, 100200, 5.876,  -29.3, 5.2, 1.673, 9.658) ! 20 mph
!,   fu=user(200100, 100200, 5.876,  -36.7, 5.0, 1.673, 9.658) ! 25 mph
!,   fu=user(200100, 100200, 5.876,  -44.0, 5.0, 1.673, 9.658) ! 30 mph
!,   fu=user(200100, 100200, 5.876, -49.13, 5.0, 1.673, 9.658) ! 33.5 mph

   sfo/2103, i=200100, j=1002103, tra, action
,   fu=user(200100, 100200,
,   12.850, 0.00, 2.00,
,   5.876,  -44.0, 5.0, 1.673, 9.658) ! 30 mph
!       b,      v,    t, lamda,  beta

   sfo/2105, i=200100, j=1002102, rot, action
,   fu=user(200100, 100200,
,   12.850, 0.00, 2.00,
,   5.876,  -44.0, 5.0, 1.673, 9.658) ! 30 mph


! guess at the torque generated by the outboard and the hull, use
! enough to get the predicted trim angle.  If the CM changes, these
! numbers will change.
!   sfo/2205, i=200100, j=1002202, rot, action
!,    fu=1000.                                                    ! 33.5 mph


   req/2001, d, i=200100, j=1002001
, c=Bullet Boat Displacement
   req/2002, v, i=200100, j=1002001
```

```
, c=Bullet Boat Velocity
   req/2003, a, i=200100, j=1002001
, c=Bullet Boat Acceleration
   req/2004, f, i=200100, j=1002001
, c=Bullet Boat Forces
   req/20881, d, i=2088, j=100
   req/2103, f, i=200100, j=1002103
   req/2105, f, i=200100, j=1002102


! hull graphics
   marker/2000, qp= 0.000,  0.000, 4.083

   marker/2001, qp= 1.000,  1.333, 3.979
   marker/2002, qp= 1.000,  0.000, 2.292
   marker/2003, qp= 1.000,  0.000, 2.292
   marker/2004, qp= 1.000,  0.000, 2.292
   marker/2005, qp= 1.000, -1.333, 3.979

   marker/2006, qp= 2.000,  2.167, 3.875
   marker/2007, qp= 2.000,  0.708, 2.042
   marker/2008, qp= 2.000,  0.000, 1.125
   marker/2009, qp= 2.000, -0.708, 2.042
   marker/2010, qp= 2.000, -2.167, 3.875

   marker/2011, qp= 3.000,  2.708, 3.813
   marker/2012, qp= 3.000,  1.625, 1.750
   marker/2013, qp= 3.000,  0.000, 0.500
   marker/2014, qp= 3.000, -1.625, 1.750
   marker/2015, qp= 3.000, -2.708, 3.813

   marker/2016, qp= 4.000,  3.021, 3.708
   marker/2017, qp= 4.000,  2.125, 1.521
   marker/2018, qp= 4.000,  0.000, 0.208
   marker/2019, qp= 4.000, -2.125, 1.521
   marker/2020, qp= 4.000, -3.021, 3.708

   marker/2021, qp= 5.000,  3.229, 3.625
   marker/2022, qp= 5.000,  2.458, 1.292
   marker/2023, qp= 5.000,  0.000, 0.063
   marker/2024, qp= 5.000, -2.458, 1.292
   marker/2025, qp= 5.000, -3.229, 3.625

   marker/2026, qp= 6.000,  3.333, 3.521
   marker/2027, qp= 6.000,  2.667, 1.063
   marker/2028, qp= 6.000,  0.000, 0.000
   marker/2029, qp= 6.000, -2.667, 1.063
   marker/2030, qp= 6.000, -3.333, 3.521

   marker/2031, qp= 7.000,  3.417, 3.458
   marker/2032, qp= 7.000,  2.833, 0.833
   marker/2033, qp= 7.000,  0.000, 0.000
   marker/2034, qp= 7.000, -2.833, 0.833
   marker/2035, qp= 7.000, -3.417, 3.458

   marker/2036, qp= 8.000,  3.458, 3.333
   marker/2037, qp= 8.000,  2.896, 0.667
   marker/2038, qp= 8.000,  0.000, 0.000
   marker/2039, qp= 8.000, -2.896, 0.667
   marker/2040, qp= 8.000, -3.458, 3.333

   marker/2041, qp= 9.000,  3.500, 3.271
   marker/2042, qp= 9.000,  2.917, 0.583
   marker/2043, qp= 9.000,  0.000, 0.000
   marker/2044, qp= 9.000, -2.917, 0.583
   marker/2045, qp= 9.000, -3.500, 3.271

   marker/2046, qp=10.000,  3.500, 3.208
   marker/2047, qp=10.000,  2.938, 0.500
   marker/2048, qp=10.000,  0.000, 0.000
   marker/2049, qp=10.000, -2.938, 0.500
   marker/2050, qp=10.000, -3.500, 3.208

   marker/2051, qp=11.000,  3.500, 3.208
   marker/2052, qp=11.000,  2.938, 0.500
   marker/2053, qp=11.000,  0.000, 0.000
   marker/2054, qp=11.000, -2.938, 0.500
   marker/2055, qp=11.000, -3.500, 3.208

   marker/2056, qp=12.000,  3.500, 3.208
   marker/2057, qp=12.000,  2.938, 0.500
   marker/2058, qp=12.000,  0.000, 0.000
   marker/2059, qp=12.000, -2.938, 0.500
   marker/2060, qp=12.000, -3.500, 3.208

   marker/2061, qp=13.000,  3.500, 3.208
   marker/2062, qp=13.000,  2.938, 0.500
   marker/2063, qp=13.000,  0.000, 0.000
   marker/2064, qp=13.000, -2.938, 0.500
   marker/2065, qp=13.000, -3.500, 3.208

   marker/2066, qp=14.000,  3.500, 3.208
   marker/2067, qp=14.000,  2.938, 0.500
   marker/2068, qp=14.000,  0.000, 0.000
   marker/2069, qp=14.000, -2.938, 0.500
   marker/2070, qp=14.000, -3.500, 3.208

   marker/2071, qp=15.000,  3.500, 3.208
   marker/2072, qp=15.000,  2.938, 0.500
   marker/2073, qp=15.000,  0.000, 0.000
   marker/2074, qp=15.000, -2.938, 0.500
   marker/2075, qp=15.000, -3.500, 3.208

   marker/2076, qp=16.000,  3.500, 3.208
   marker/2077, qp=16.000,  2.938, 0.500
   marker/2078, qp=16.000,  0.000, 0.000
   marker/2079, qp=16.000, -2.938, 0.500
   marker/2080, qp=16.000, -3.500, 3.208

   marker/2081, qp=17.000,  3.500, 3.208
   marker/2082, qp=17.000,  2.938, 0.500
   marker/2083, qp=17.000,  0.000, 0.000
   marker/2084, qp=17.000, -2.938, 0.500
   marker/2085, qp=17.000, -3.500, 3.208

   marker/2086, qp=18.000,  3.500, 3.208
   marker/2087, qp=18.000,  2.938, 0.500
   marker/2088, qp=18.000,  0.000, 0.000    ! Special check point
   marker/2089, qp=18.000, -2.938, 0.500
   marker/2090, qp=18.000, -3.500, 3.208


   gr/200, outline-200,
,-2000, 2001, 2002
,-2000, 2004, 2005
!
,-2001, 2006, 2007, 2002
,-2002, 2007, 2008, 2003
```

```
,-2003, 2008, 2009, 2004
,-2004, 2009, 2010, 2005
!
,-2006, 2011, 2012, 2007
,-2007, 2012, 2013, 2008
,-2008, 2013, 2014, 2009
,-2009, 2014, 2015, 2010
!
,-2011, 2016, 2017, 2012
,-2012, 2017, 2018, 2013
,-2013, 2018, 2019, 2014
,-2014, 2019, 2020, 2015
!
,-2016, 2021, 2022, 2017
,-2017, 2022, 2023, 2018
,-2018, 2023, 2024, 2019
,-2019, 2024, 2025, 2020
!
,-2021, 2026, 2027, 2022
,-2022, 2027, 2028, 2023
,-2023, 2028, 2029, 2024
,-2024, 2029, 2030, 2025
!
,-2026, 2031, 2032, 2027
,-2027, 2032, 2033, 2028
,-2028, 2033, 2034, 2029
,-2029, 2034, 2035, 2030
!
,-2031, 2036, 2037, 2032
,-2032, 2037, 2038, 2033
,-2033, 2038, 2039, 2034
,-2034, 2039, 2040, 2035
!
,-2036, 2041, 2042, 2037
,-2037, 2042, 2043, 2038
,-2038, 2043, 2044, 2039
,-2039, 2044, 2045, 2040
!
,-2041, 2046, 2047, 2042
,-2042, 2047, 2048, 2043
,-2043, 2048, 2049, 2044
,-2044, 2049, 2050, 2045
!
,-2046, 2051, 2052, 2047
,-2047, 2052, 2053, 2048
,-2048, 2053, 2054, 2049
,-2049, 2054, 2055, 2050
!
,-2051, 2056, 2057, 2052
,-2052, 2057, 2058, 2053
,-2053, 2058, 2059, 2054
,-2054, 2059, 2060, 2055
!
,-2056, 2061, 2062, 2057
,-2057, 2062, 2063, 2058
,-2058, 2063, 2064, 2059
,-2059, 2064, 2065, 2060
!
,-2061, 2066, 2067, 2062
,-2062, 2067, 2068, 2063
,-2063, 2068, 2069, 2064
,-2064, 2069, 2070, 2065
!
,-2066, 2071, 2072, 2067
,-2067, 2072, 2073, 2068
,-2068, 2073, 2074, 2069
,-2069, 2074, 2075, 2070
!
,-2071, 2076, 2077, 2072
,-2072, 2077, 2078, 2073
,-2073, 2078, 2079, 2074
,-2074, 2079, 2080, 2075
!
,-2076, 2081, 2082, 2077
,-2077, 2082, 2083, 2078
,-2078, 2083, 2084, 2079
,-2079, 2084, 2085, 2080
!
,-2081, 2086, 2087, 2082
,-2082, 2087, 2088, 2083
,-2083, 2088, 2089, 2084
,-2084, 2089, 2090, 2085
!
,-2090, 2089, 2088, 2087, 2086



! another boat
part/300, cm=300, ma=4868, ip=50000,156000,156000
   marker/300, qp=-20.000, 0.0, 0.75, reu=90D, 0, 0
   marker/301, qp=-20.000, -11.770, -1.25, reu=90D, 0, 0
   marker/300100 , qp=-20.000, 0.0, 0.75, reu=90D, 0, 0
   marker/100300 , qp=-20.000, 0.0, 0.75, pa=100, reu=90D, 0, 0
   marker/1003001, pa=100                                    vertical
   marker/1003002, reu= 90D,  90D, 0, pa=100                 lateral
   marker/1003004, reu= 90D,  90D, 0, pa=100                 roll
   marker/1003005, reu=   0, -90D, 0, pa=100                 pitch

! constrain boats to 3 dof

jo/200, plan, i=103, j=303
  ma/103, pa=100, qp=-20.000, 0.0, 0.75
, reu=0,90d,0
  ma/303, pa=300, qp=-20.000, 0.0, 0.75
, reu=0,90d,0

   bushing/300, i=300, j=100
,  c=    0,    0,  1000
!      lat, fore, vert
, ct= 100000,  10000, 100000
!      pitch,   roll,  yaw

! vertical
   sfo/3001, i=300100, j=1003001, tra, action
,    fu=-user(300100, 100300, 11.770, 0.00, 2.00)
! lateral
   sfo/3002, i=300100, j=1003002, tra, action
,    fu= 2.* 1.2 * 19.3457 * 1.94 * vx(300100) * vx(300100) / 2.
   sfo/3004, i=300100, j=1003004, rot, action
,    fu= user(300100, 100300, 11.770, 0.00, 2.00)
   sfo/3005, i=300100, j=1003005, rot, action
,    fu= user(300100, 100300, 11.770, 0.00, 2.00)

    req/3001, d, i=300100, j=1003001
, c=Target Boat Displacement
    req/3002, v, i=300100, j=1003001
, c=Target Boat Velocity
    req/3003, a, i=300100, j=1003001
```

```
, c=Target Boat Acceleration
    req/3004, f, i=300100, j=1003001
, c=Target Boat Forces

! impact stuff starts here

! impact points on target boat

!       port gunwale
  ma/3200,   pa=300, qp=-16.50,0,1.958

  ma/303101, pa=300, qp=-16.50,0,1.958
, reu=90,90d,0
  ma/303102, pa=300, qp=-16.50,0,1.958
, reu=0,90d,0
  ma/303103, pa=300, qp=-16.50,0,1.958
, reu=0,0,0

  gr/303101, cir, cm=303101, rad=.1
  gr/303102, cir, cm=303102, rad=.1
  gr/303103, cir, cm=303103, rad=.1

!       starboard gunwale
  ma/3300,   pa=300, qp=-23.50,0,1.958

  ma/303104, pa=300, qp=-23.50,0,1.958
, reu=90,90d,0
  ma/303105, pa=300, qp=-23.50,0,1.958
, reu=0,90d,0
  ma/303106, pa=300, qp=-23.50,0,1.958
, reu=0,0,0

  gr/303104, cir, cm=303104, rad=.1
  gr/303105, cir, cm=303105, rad=.1
  gr/303106, cir, cm=303106, rad=.1

!       port chine
  ma/3400,   pa=300, qp=-17.06,0,-0.750

  ma/303107, pa=300, qp=-17.06,0,-0.750
, reu=90,90d,0
  ma/303108, pa=300, qp=-17.06,0,-0.750
, reu=0,90d,0
  ma/303109, pa=300, qp=-17.06,0,-0.750
, reu=0,0,0

  gr/303107, cir, cm=303107, rad=.1
  gr/303108, cir, cm=303108, rad=.1
  gr/303109, cir, cm=303109, rad=.1

! striking boat impact circle graphics, part/200
gr/20001, cir, cm=20001, rad=2
gr/20002, cir, cm=20002, rad=2
gr/20003, cir, cm=20003, rad=2
gr/20004, cir, cm=20004, rad=2
gr/20005, cir, cm=20005, rad=2
gr/20006, cir, cm=20006, rad=2
gr/20007, cir, cm=20007, rad=2
gr/20008, cir, cm=20008, rad=2
gr/20009, cir, cm=20009, rad=2
gr/200010, cir, cm=200010, rad=2
gr/200011, cir, cm=200011, rad=2
gr/200012, cir, cm=200012, rad=2
gr/200013, cir, cm=200013, rad=2
gr/200014, cir, cm=200014, rad=2
gr/200015, cir, cm=200015, rad=2
gr/200016, cir, cm=200016, rad=2
gr/200017, cir, cm=200017, rad=2
gr/200018, cir, cm=200018, rad=2
gr/200019, cir, cm=200019, rad=2

! impact centers
  ma/20001, qp= 121.746, 0, 3.808
, reu=0,90d,0
, pa=200
  ma/20002, qp= 122.519, 0, 2.343
, reu=0,90d,0
, pa=200
  ma/20003, qp= 123.060, 0, 1.571
, reu=0,90d,0
, pa=200
  ma/20004, qp= 123.561, 0, 1.170
, reu=0,90d,0
, pa=200
  ma/20005, qp= 124.287, 0, 0.937
, reu=0,90d,0
, pa=200
  ma/20006, qp= 125.126, 0, 0.809
, reu=0,90d,0
, pa=200
  ma/20007, qp= 126.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/20008, qp= 127.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/20009, qp= 128.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200010, qp=129.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200011, qp=130.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200012, qp=131.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200013, qp=132.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200014, qp=133.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200015, qp=134.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200016, qp=135.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200017, qp=136.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200018, qp=137.000, 0, 0.750
, reu=0,90d,0
, pa=200
  ma/200019, qp=138.000, 0, 0.750
, reu=0,90d,0
```

```
, pa=200


! impact forces **********

! ***** port gunwale
!       fails at 5,000 lbs

sf/3201, tr, i=20001, j=3200
, fu=user( 20001, 3200, 2, 8500, 1, 10, 0.1,  5000 )
! fu=user(     i,    j, x1,    k, e, Cmax,   d, Fbreak )
re/32011, d, i=20001, j=3200
, c=port gunwale
re/32014, f, i=20001, j=3200

sf/3202, tr, i=20002, j=3200
, fu=user( 20002, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32021, d, i=20002, j=3200
re/32024, f, i=20002, j=3200

sf/3203, tr, i=20003, j=3200
, fu=user( 20003, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32031, d, i=20003, j=3200
re/32034, f, i=20003, j=3200

sf/3204, tr, i=20004, j=3200
, fu=user( 20004, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32041, d, i=20004, j=3200
re/32044, f, i=20003, j=3200

sf/3205, tr, i=20005, j=3200
, fu=user( 20005, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32051, d, i=20005, j=3200
re/32054, f, i=20005, j=3200

sf/3206, tr, i=20006, j=3200
, fu=user( 20006, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32061, d, i=20006, j=3200
re/32064, f, i=20006, j=3200

sf/3207, tr, i=20007, j=3200
, fu=user( 20007, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32074, f, i=20007, j=3200

sf/3208, tr, i=20008, j=3200
, fu=user( 20008, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32084, f, i=20008, j=3200

sf/3209, tr, i=20009, j=3200
, fu=user( 20009, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32094, f, i=20009, j=3200

sf/3210, tr, i=200010, j=3200
, fu=user( 200010, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32104, f, i=200010, j=3200

sf/3211, tr, i=200011, j=3200
, fu=user( 200011, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32114, f, i=200011, j=3200

sf/3212, tr, i=200012, j=3200
, fu=user( 200012, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32124, f, i=200012, j=3200

sf/3213, tr, i=200013, j=3200
, fu=user( 200013, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32134, f, i=200013, j=3200

sf/3214, tr, i=200014, j=3200
, fu=user( 200014, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32144, f, i=200014, j=3200

sf/3215, tr, i=200015, j=3200
, fu=user( 200015, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32154, f, i=200015, j=3200

sf/3216, tr, i=200016, j=3200
, fu=user( 200016, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32164, f, i=200016, j=3200

sf/3217, tr, i=200017, j=3200
, fu=user( 200017, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32174, f, i=200017, j=3200

sf/3218, tr, i=200018, j=3200
, fu=user( 200018, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32184, f, i=200018, j=3200

sf/3219, tr, i=200019, j=3200
, fu=user( 200019, 3200, 2, 8500, 1, 10, 0.1,  5000 )
re/32194, f, i=200019, j=3200


! ***** starboard gunwale
!       does not fail

sf/3301, tr, i=20001, j=3300
, fu=user( 20001, 3300, 2, 8500, 1, 10, 0.1,  5000 )
! fu=user(     i,    j, x1,    k, e, cmax,   d )
re/33014, f, i=20001, j=3300

sf/3302, tr, i=20002, j=3300
, fu=user( 20002, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33024, f, i=20002, j=3300

sf/3303, tr, i=20003, j=3300
, fu=user( 20003, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33034, f, i=20003, j=3300

sf/3304, tr, i=20004, j=3300
, fu=user( 20004, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33044, f, i=20004, j=3300

sf/3305, tr, i=20005, j=3300
, fu=user( 20005, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33054, f, i=20005, j=3300

sf/3306, tr, i=20006, j=3300
, fu=user( 20006, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33064, f, i=20006, j=3300

sf/3307, tr, i=20007, j=3300
, fu=user( 20007, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33074, f, i=20007, j=3300

sf/3308, tr, i=20008, j=3300
, fu=user( 20008, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33084, f, i=20008, j=3300
```

```
sf/3309, tr, i=20009, j=3300
, fu=user( 20009, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33094, f, i=20009, j=3300

sf/3310, tr, i=200010, j=3300
, fu=user( 200010, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33104, f, i=200010, j=3300

sf/3311, tr, i=200011, j=3300
, fu=user( 200011, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33114, f, i=200011, j=3300

sf/3312, tr, i=200012, j=3300
, fu=user( 200012, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33124, f, i=200012, j=3300

sf/3313, tr, i=200013, j=3300
, fu=user( 200013, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33134, f, i=200013, j=3300

sf/3314, tr, i=200014, j=3300
, fu=user( 200014, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33144, f, i=200014, j=3300

sf/3315, tr, i=200015, j=3300
, fu=user( 200015, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33154, f, i=200015, j=3300

sf/3316, tr, i=200016, j=3300
, fu=user( 200016, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33164, f, i=200016, j=3300

sf/3317, tr, i=200017, j=3300
, fu=user( 200017, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33174, f, i=200017, j=3300

sf/3318, tr, i=200018, j=3300
, fu=user( 200018, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33184, f, i=200018, j=3300

sf/3319, tr, i=200019, j=3300
, fu=user( 200019, 3300, 2, 8500, 1, 10, 0.1,  5000 )
re/33194, f, i=200019, j=3300


! ***** port chine
!       does not fail

sf/3401, tr, i=20001, j=3400
, fu=user( 20001, 3400, 2, 8500, 1, 10, 0.1,  5000 )
! fu=user(     i,     j, x1,     k, e, cmax,    d )
re/34014, f, i=20001, j=3400

sf/3402, tr, i=20002, j=3400
, fu=user( 20002, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34024, f, i=20002, j=3400

sf/3403, tr, i=20003, j=3400
, fu=user( 20003, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34034, f, i=20003, j=3400

sf/3404, tr, i=20004, j=3400
, fu=user( 20004, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34044, f, i=20004, j=3400

sf/3405, tr, i=20005, j=3400
, fu=user( 20005, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34054, f, i=20005, j=3400

sf/3406, tr, i=20006, j=3400
, fu=user( 20006, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34064, f, i=20006, j=3400

sf/3407, tr, i=20007, j=3400
, fu=user( 20007, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34074, f, i=20007, j=3400

sf/3408, tr, i=20008, j=3400
, fu=user( 20008, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34084, f, i=20008, j=3400

sf/3409, tr, i=20009, j=3400
, fu=user( 20009, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34094, f, i=20009, j=3400

sf/3410, tr, i=200010, j=3400
, fu=user( 200010, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34104, f, i=200010, j=3400

sf/3411, tr, i=200011, j=3400
, fu=user( 200011, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34114, f, i=200011, j=3400

sf/3412, tr, i=200012, j=3400
, fu=user( 200012, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34124, f, i=200012, j=3400

sf/3413, tr, i=200013, j=3400
, fu=user( 200013, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34134, f, i=200013, j=3400

sf/3414, tr, i=200014, j=3400
, fu=user( 200014, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34144, f, i=200014, j=3400

sf/3415, tr, i=200015, j=3400
, fu=user( 200015, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34154, f, i=200015, j=3400

sf/3416, tr, i=200016, j=3400
, fu=user( 200016, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34164, f, i=200016, j=3400

sf/3417, tr, i=200017, j=3400
, fu=user( 200017, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34174, f, i=200017, j=3400

sf/3418, tr, i=200018, j=3400
, fu=user( 200018, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34184, f, i=200018, j=3400

sf/3419, tr, i=200019, j=3400
, fu=user( 200019, 3400, 2, 8500, 1, 10, 0.1,  5000 )
re/34194, f, i=200019, j=3400

!
! impact request
```

```
re/3200, t=Null:PortGunl:StarGunl:PortChin:Null:Total
, c=Impact Forces
, fu=user(1)

! friction
!
! The models are set up to collide at about 3 sec.  Use about .1*static
! boat weight or 486.8 opposing the motion of the boat.

sfo/2501, i=200100, j=1002504, tra, actiononly
, fu=  486.8 * (
,   havsin(time, 3.1, 0.0, 3.2, 1.0)
,  -havsin(time, 3.8, 0.0, 3.9, 1.0) )

sfo/3501, i=300100, j=1003504, tra, actiononly
, fu= -486.8 * (
,   havsin(time, 3.1, 0.0, 3.2, 1.0)
,  -havsin(time, 3.8, 0.0, 3.9, 1.0) )

   marker/1002504, reu= 90D,  90D, 0, pa=100        ! friction
   marker/1003504, reu= 90D,  90D, 0, pa=100        ! friction


end
```

APPENDIX D

Output from the 30 MPH Simulation - Graphs

LIST OF GRAPHS PROVIDED FOR THE 30 MPH COLLISION

ReqNo.	Col.	Axis	Parameter
2001	1	Y	BB Displacement
2002	1	Y	BB Velocity
2003	1	Y	BB Acceleration
2001	3	Z	BB Displacement
2002	3	Z	BB Velocity
2003	3	Z	BB Acceleration
2004	3	Z	BB Forces (Buoyant)
2001	5	Pitch	BB Displacement
2002	5	Pitch	BB Velocity
2003	5	Pitch	BB Acceleration
2001	1,3	X,Z	BB CG Disp (Z) vs BB CG Disp (X) (CG Trajectory)
3001	1	X	TB Displacement
3002	1	X	TB Velocity
3003	1	X	TB Acceleration
3001	3	Z	TB Displacement
3002	3	Z	TB Velocity
3003	3	Z	TB Acceleration
3004	3	Z	TB Forces (Buoyant Forces)
3001	5	Pitch	TB Displacement
3002	5	Pitch	TB Velocity
3003	5	Pitch	TB Acceleration

Force Diagrams

Port Gunwale Impact Forces
(First two of 19 impact fields)

Starboard Gunwale Impact Forces
(Five impact fields)

Port Chine Impact Forces
(Three impact fields)

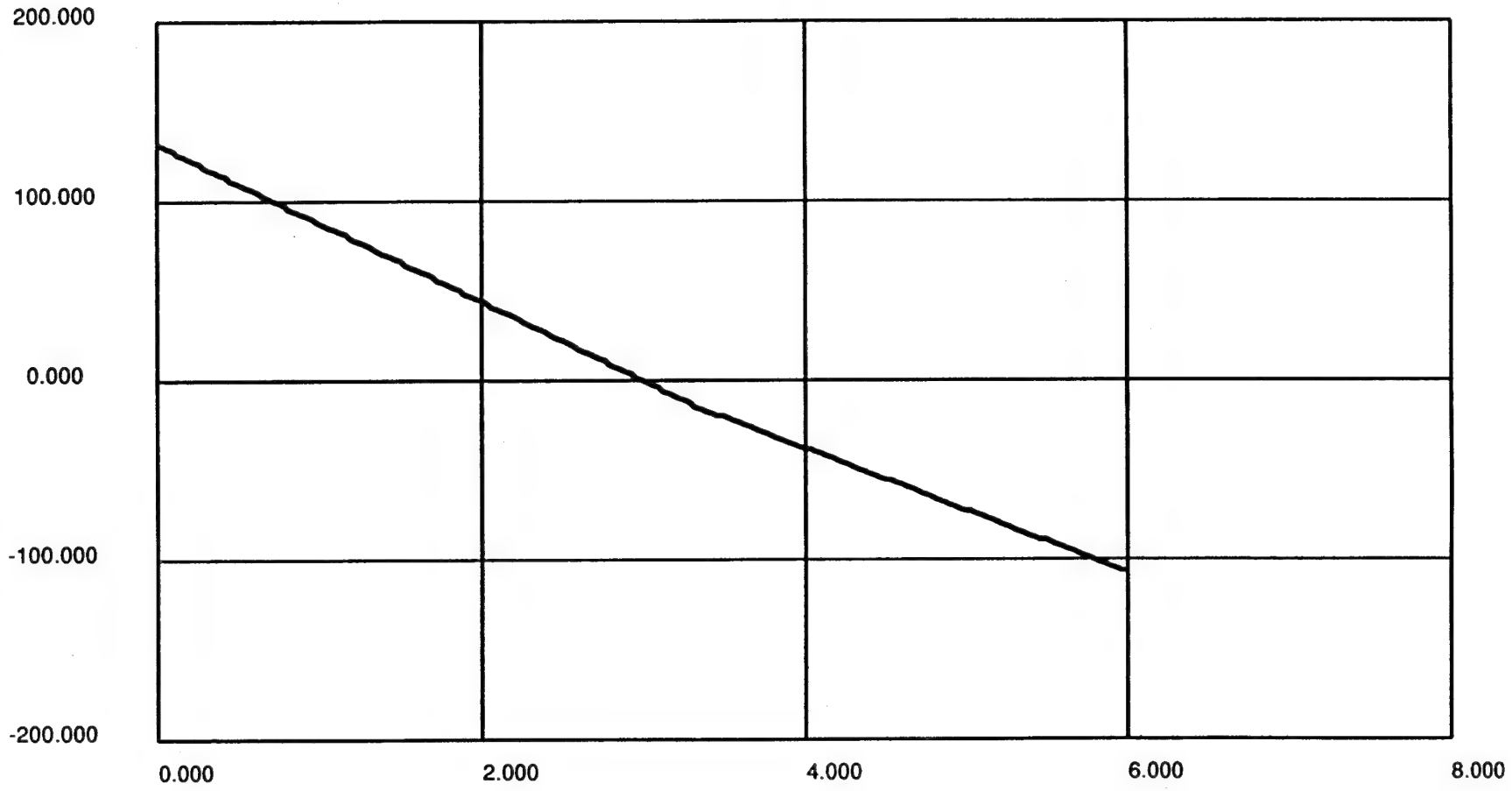
Total Port Gunwale Impact Force
Total Starboard Gunwale Impact Force
Total Port Chine Impact Force
Total Impact Force

Key:

Col 1 = x axis
Col 2 = y axis
Col 3 = z axis
Col 4 = Yaw
Col 5 = Pitch
Col 6 = Roll

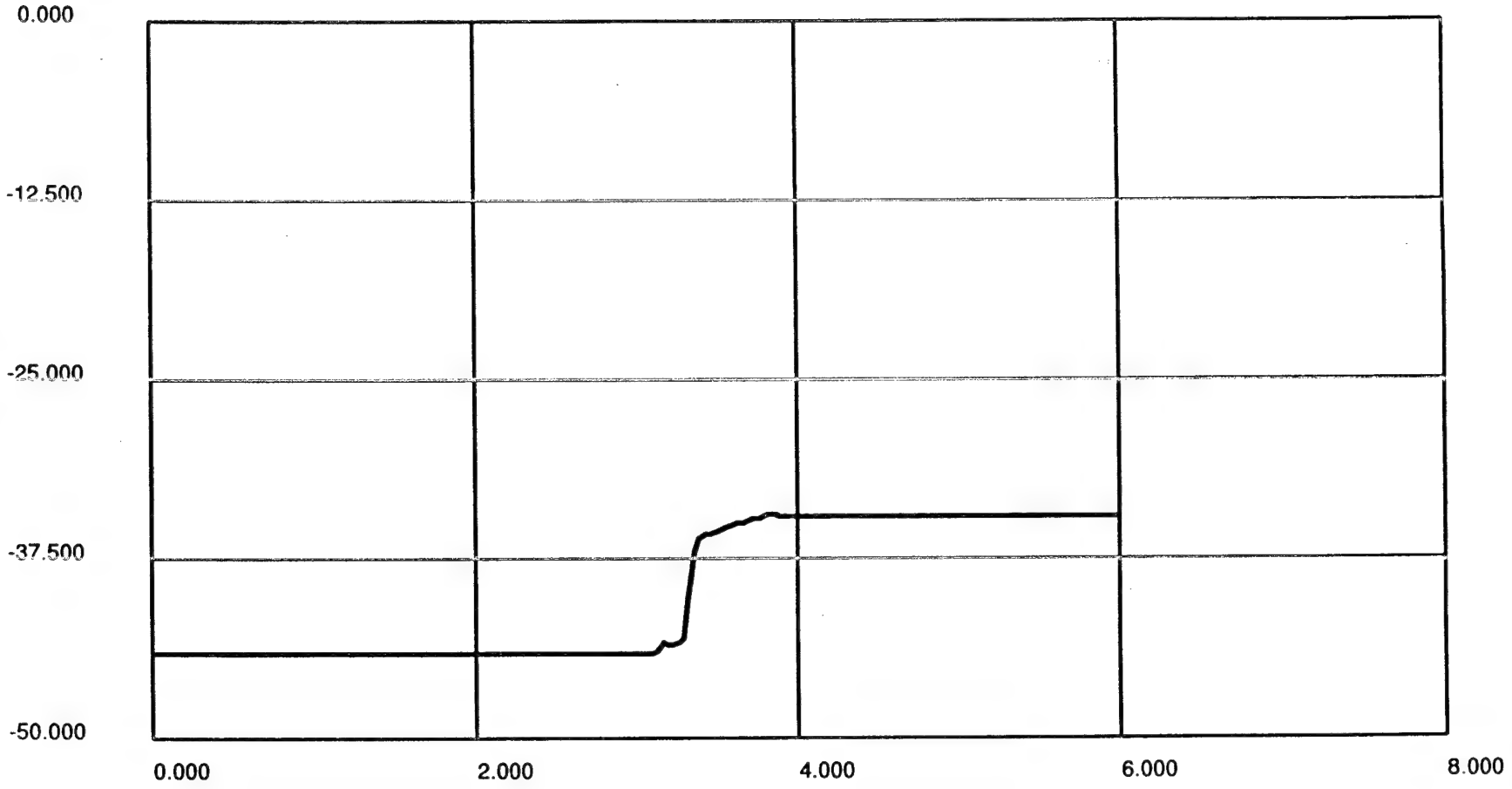
BB = Bullet Boat
TB = Target Boat

Req 2001, Col 1, Bullet Boat Displacement



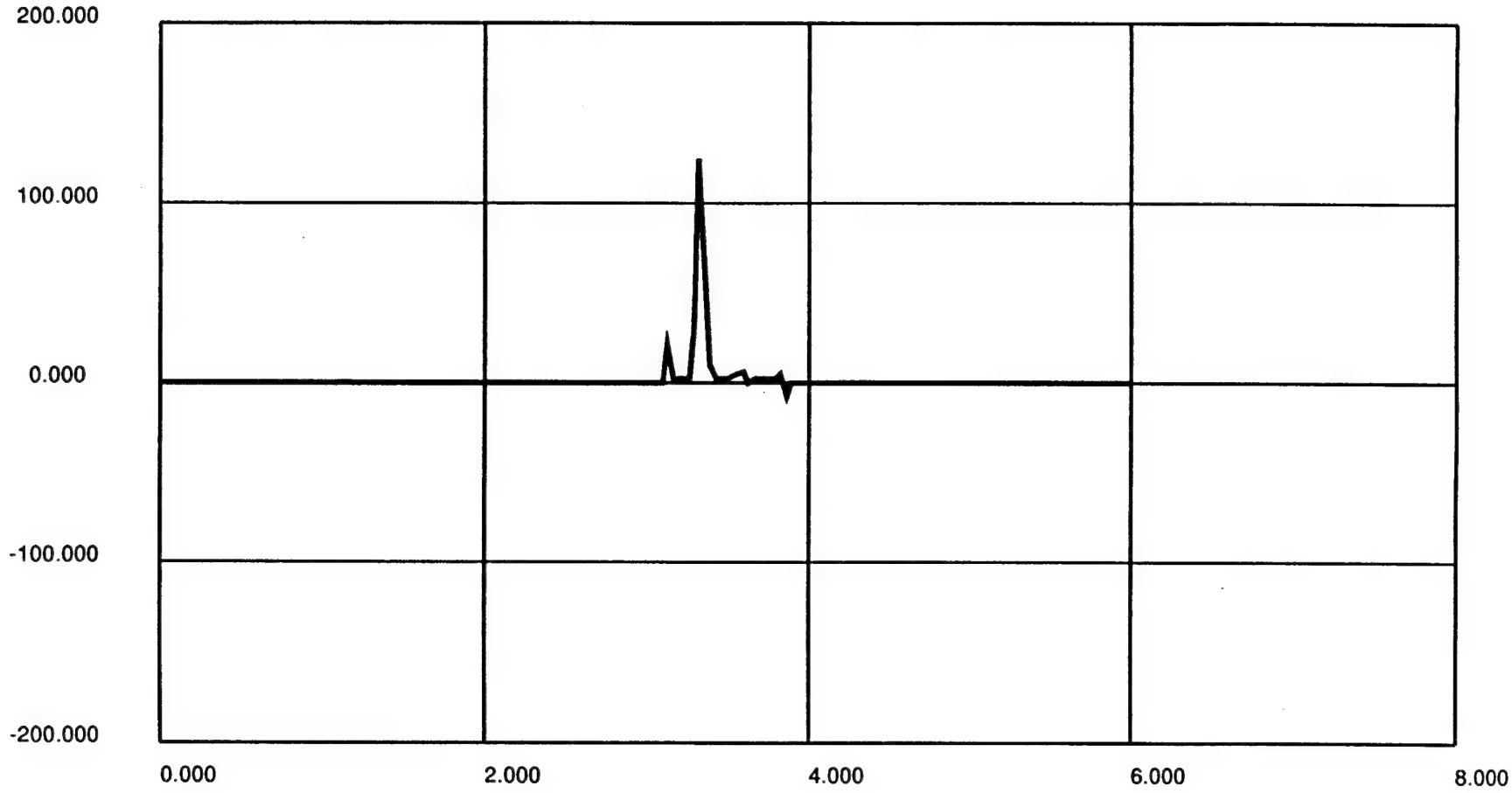
BAP 911101

Req 2002, Col 1, Bullet Boat Velocity



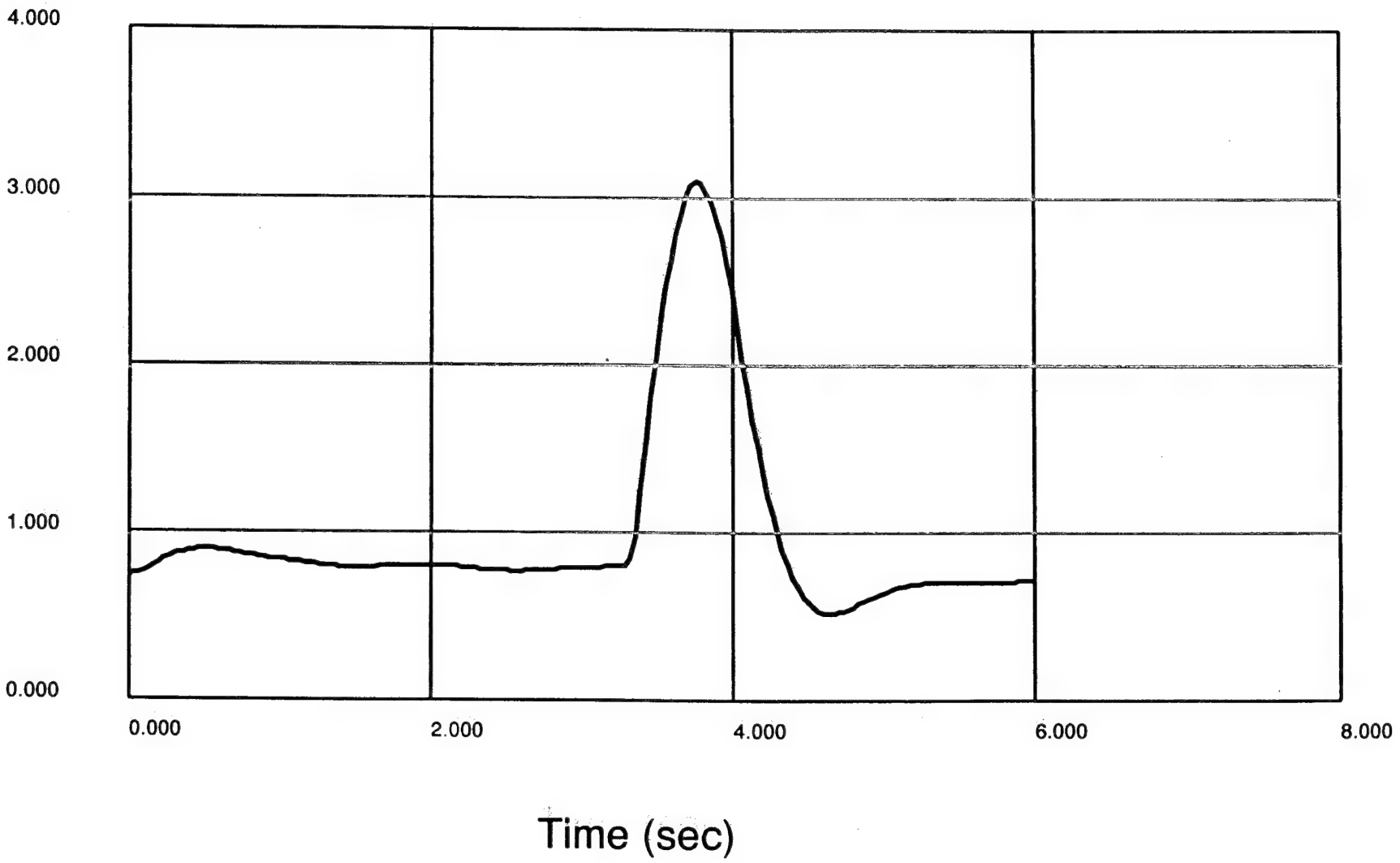
BAP 911101

Req 2003, Col 1, Bullet Boat Acceleration



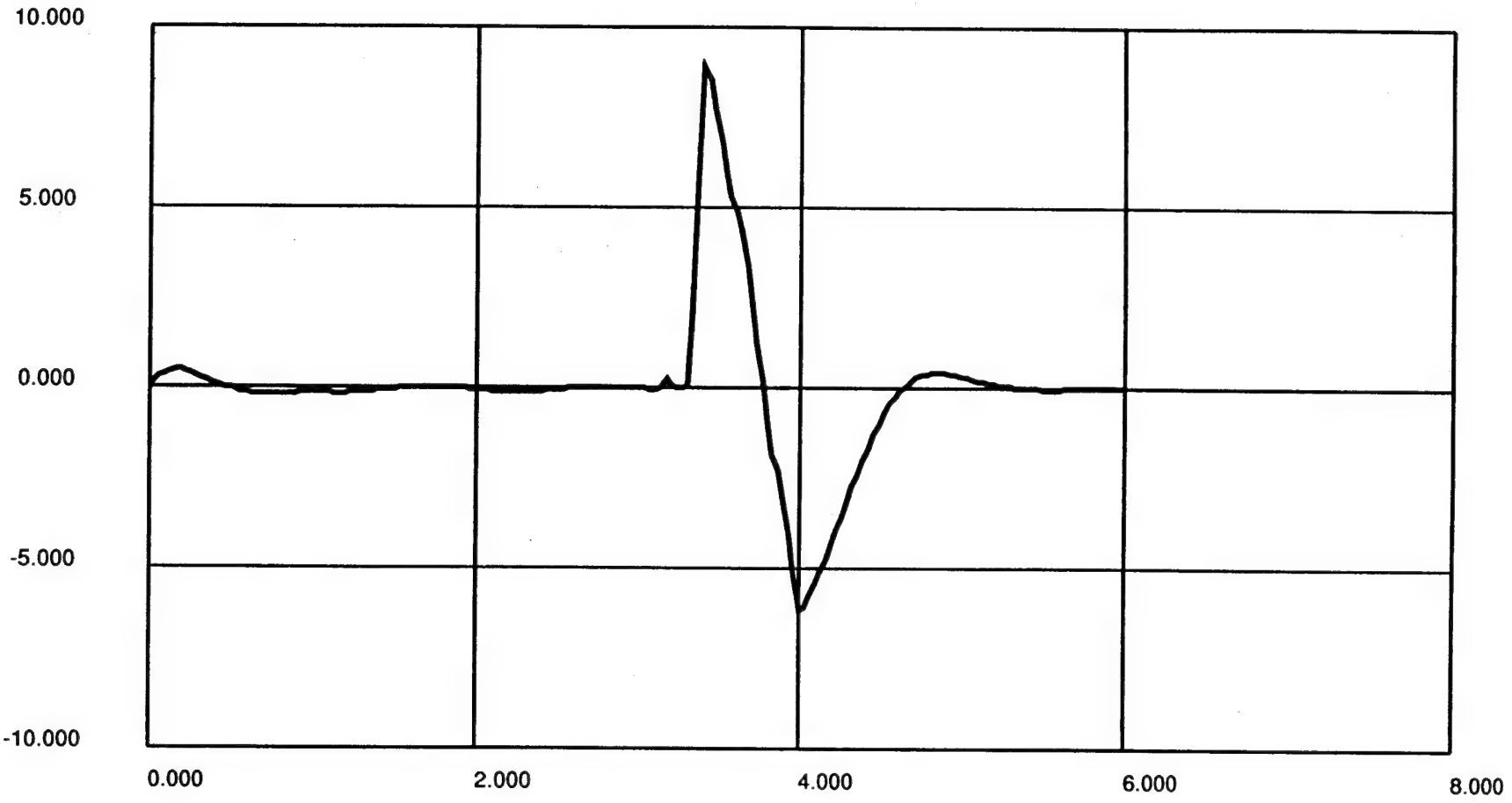
BAP 911101

Req 2001, Col 3, Bullet Boat Displacement



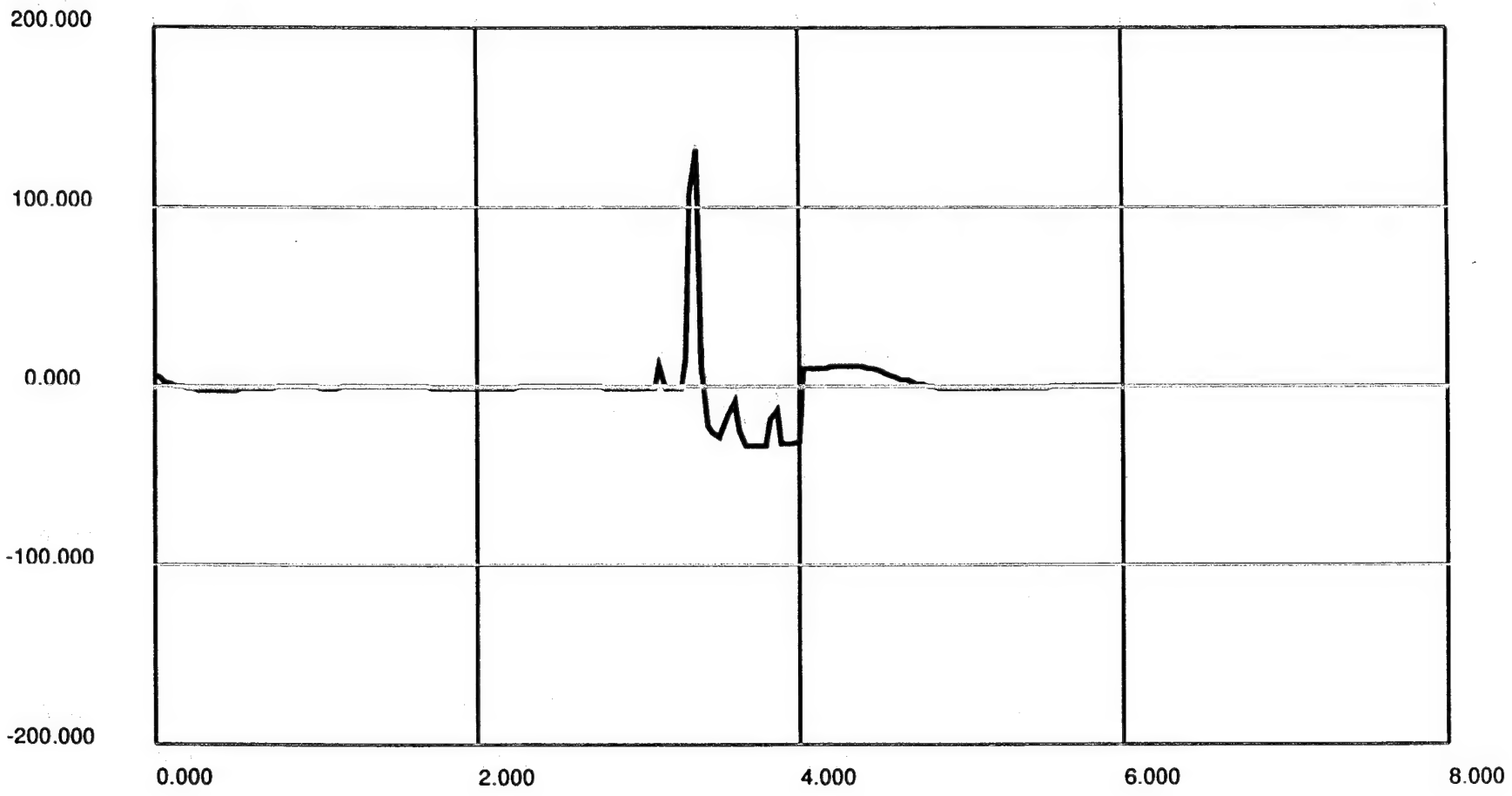
BAP 911101

Req 2002, Col 3, Bullet Boat Velocity



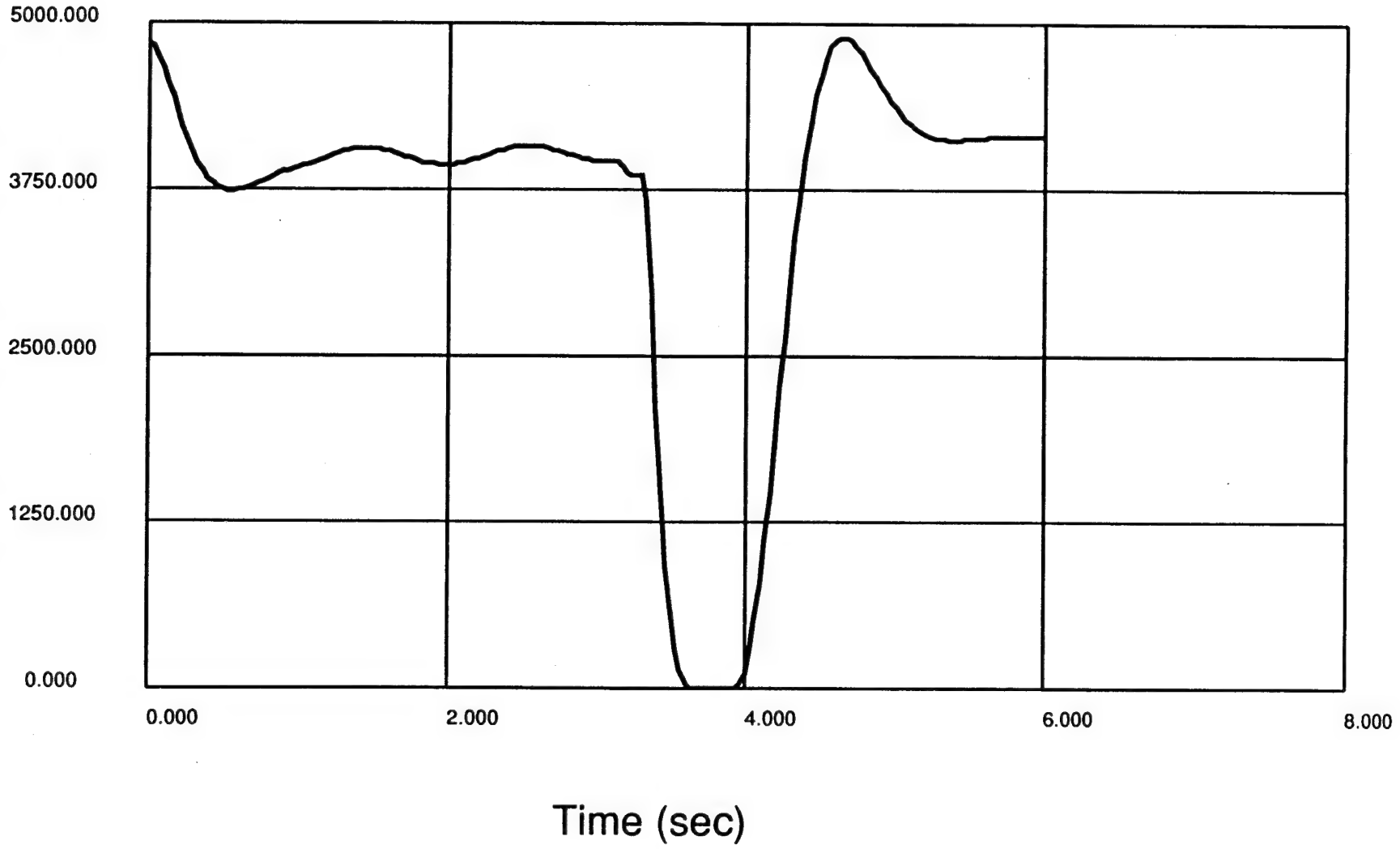
BAP 911101

Req 2003, Col 3, Bullet Boat Acceleration



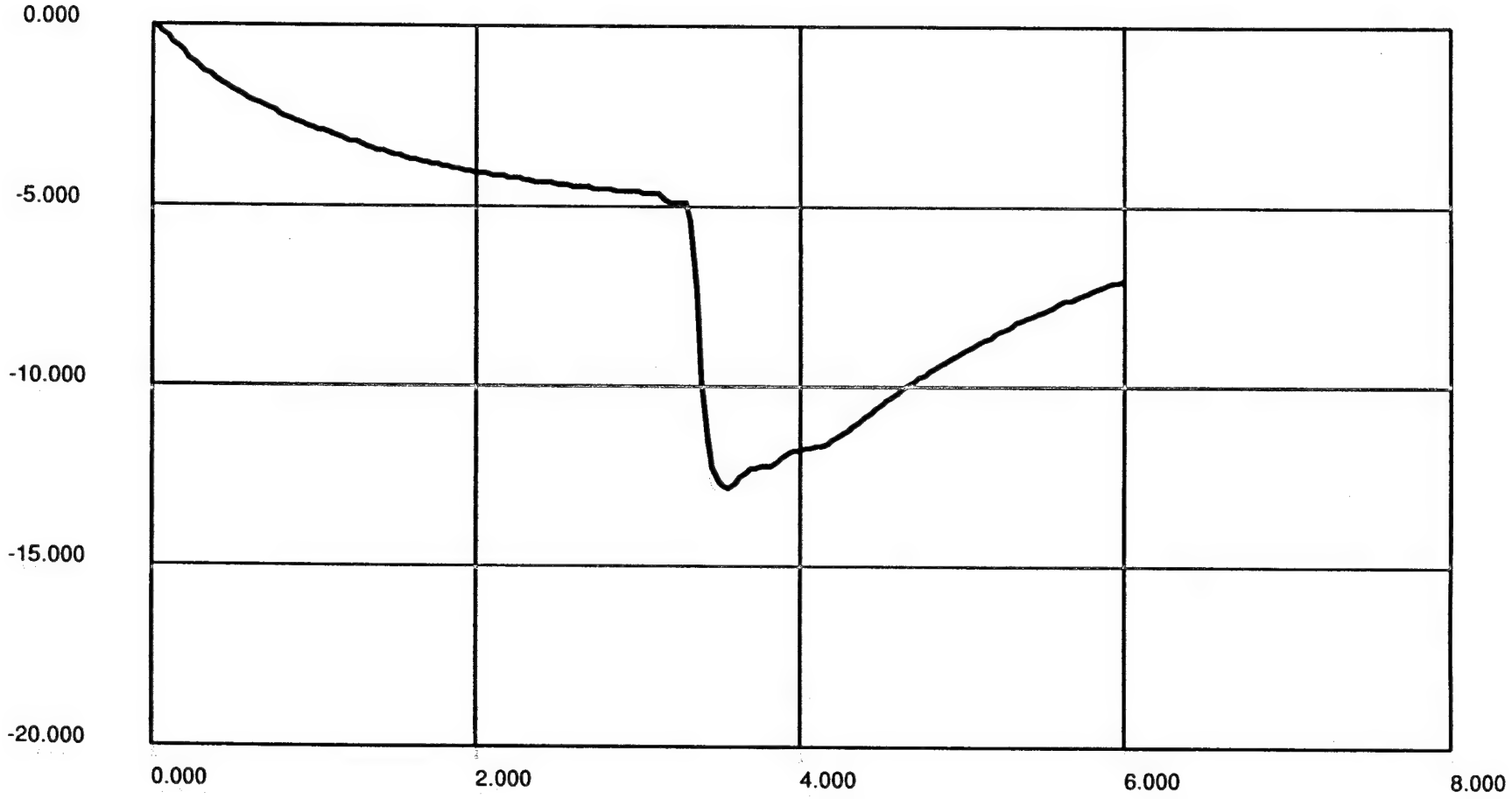
BAP 911101

Req 2004, Col 3, Bullet Boat Forces



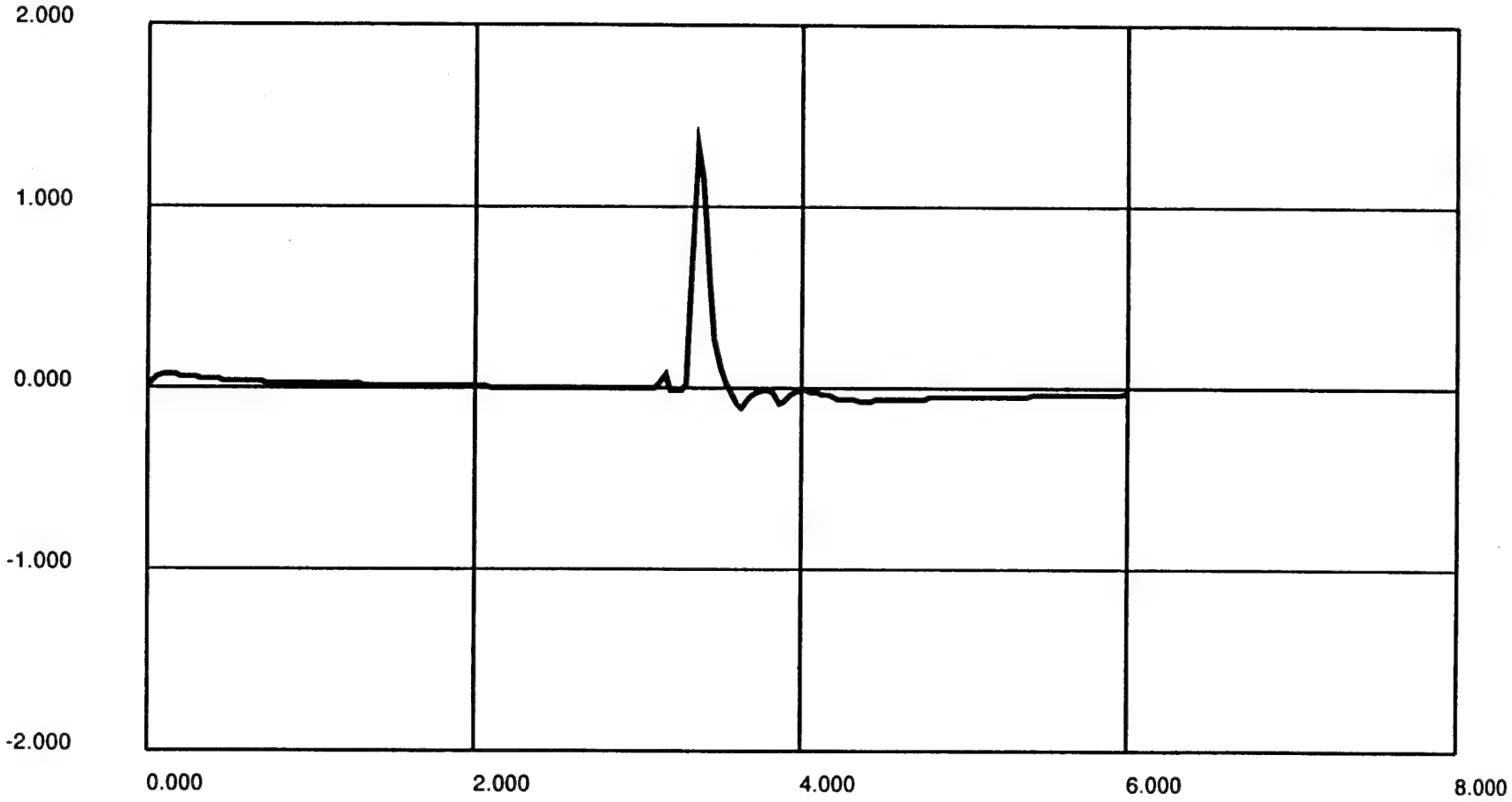
BAP 911101

Req 2001, Col 5, Bullet Boat Displacement



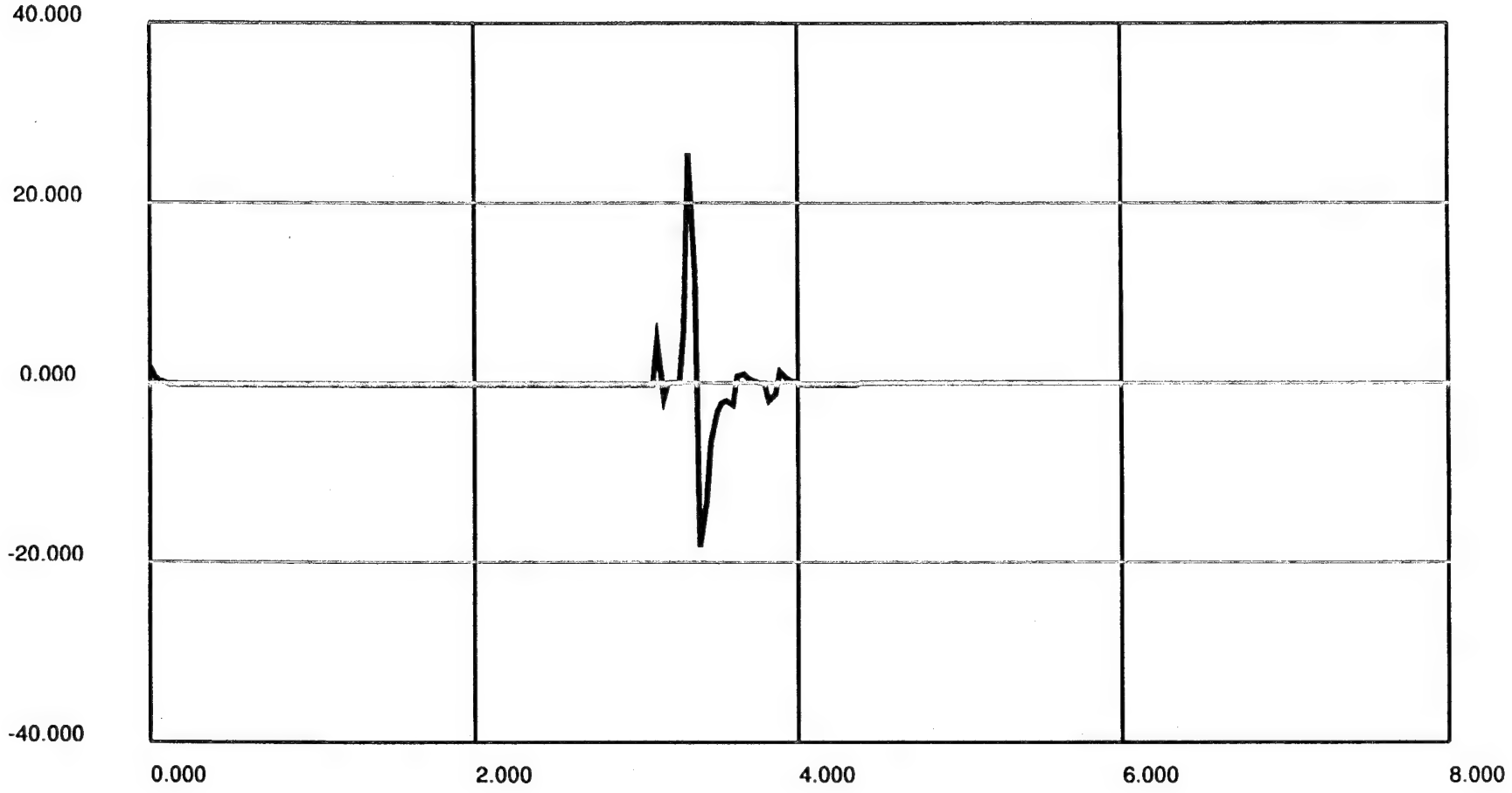
BAP 911101

Req 2002, Col 5, Bullet Boat Velocity



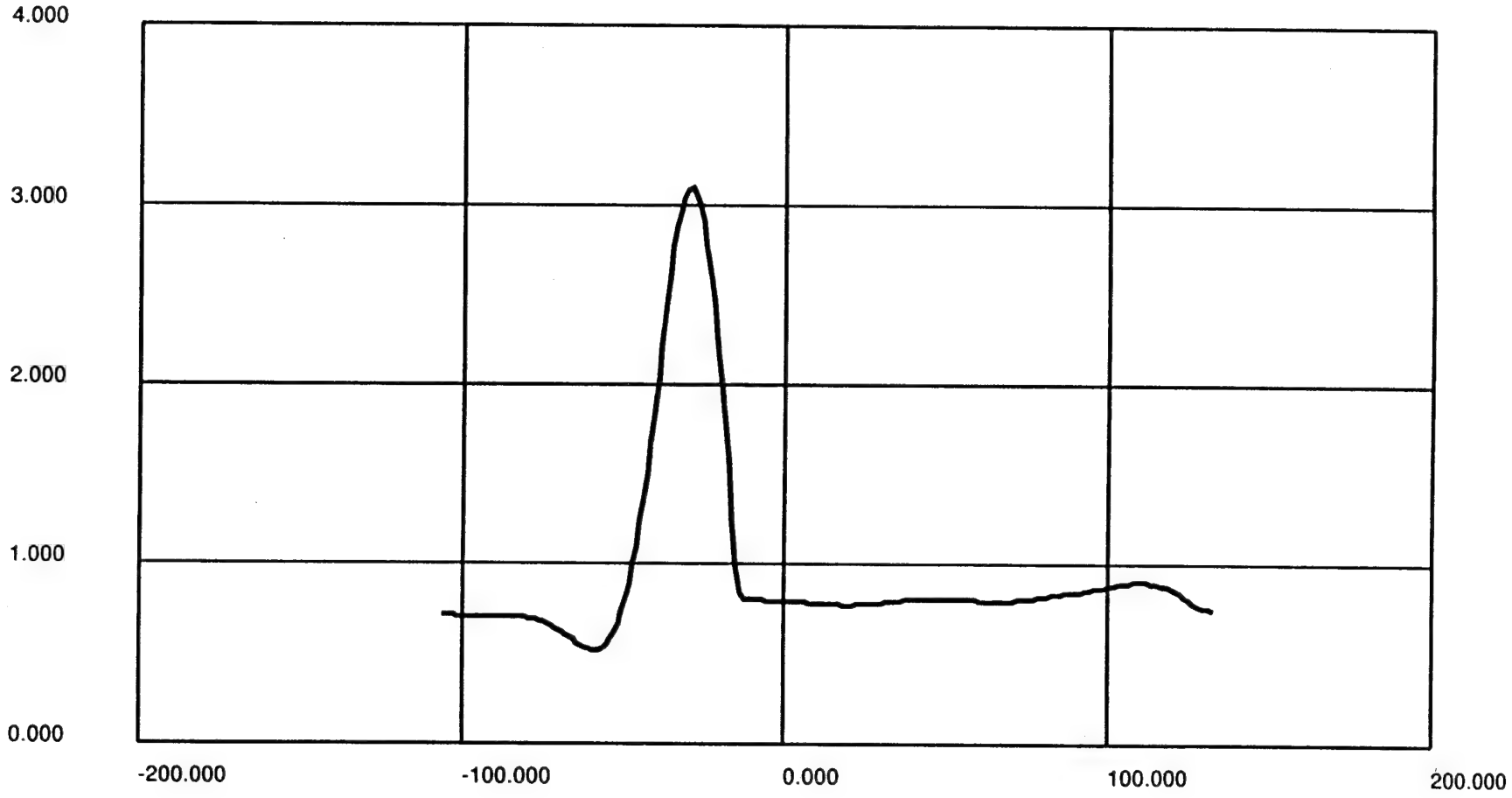
BAP 911101

Req 2003, Col 5, Bullet Boat Acceleration



BAP 911101

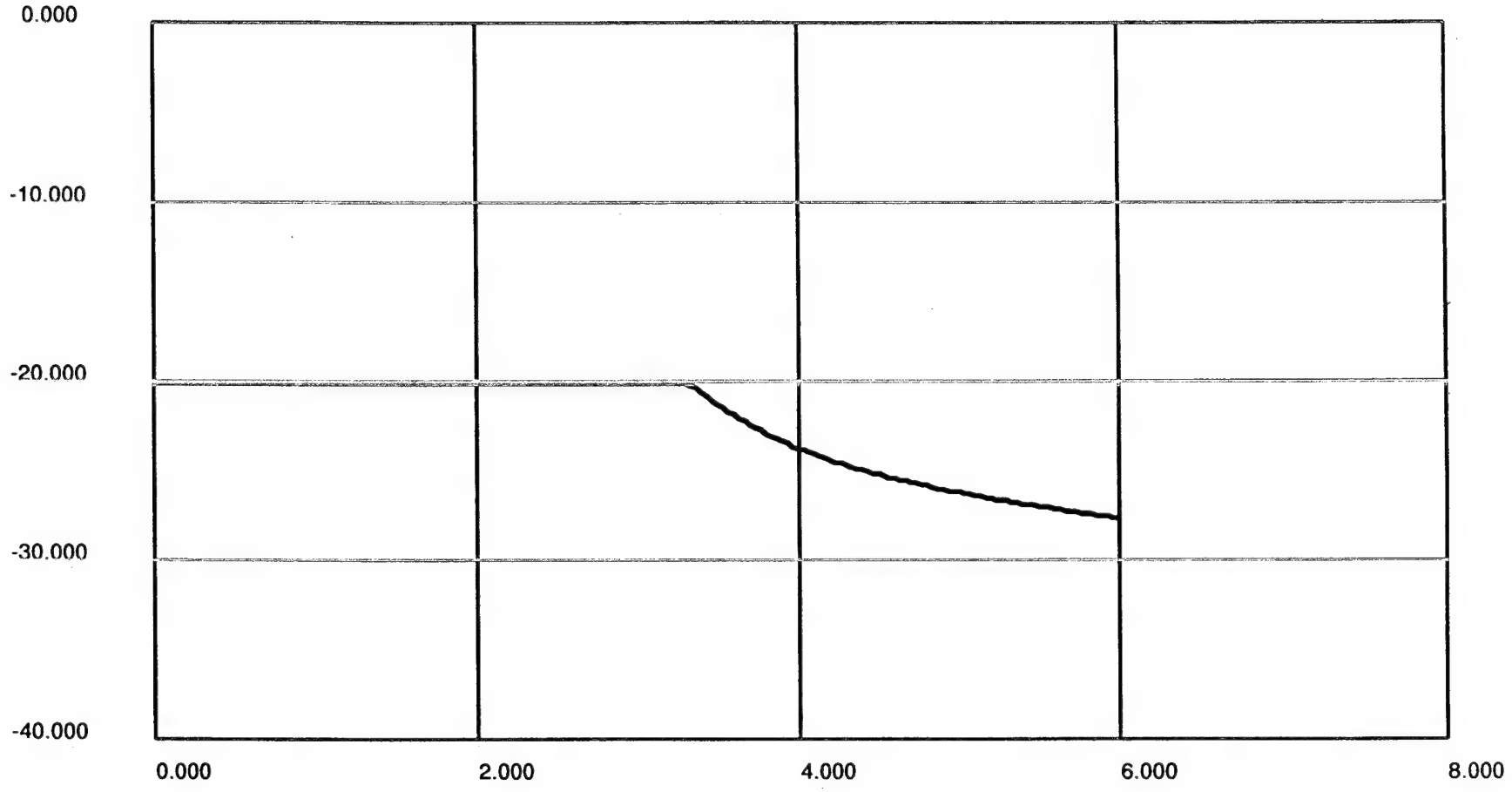
Req 2001, Col 1, Bullet Boat Displacement
Req 2001, Col 3, Bullet Boat Displacement



Bullet Boat CG Trajectory

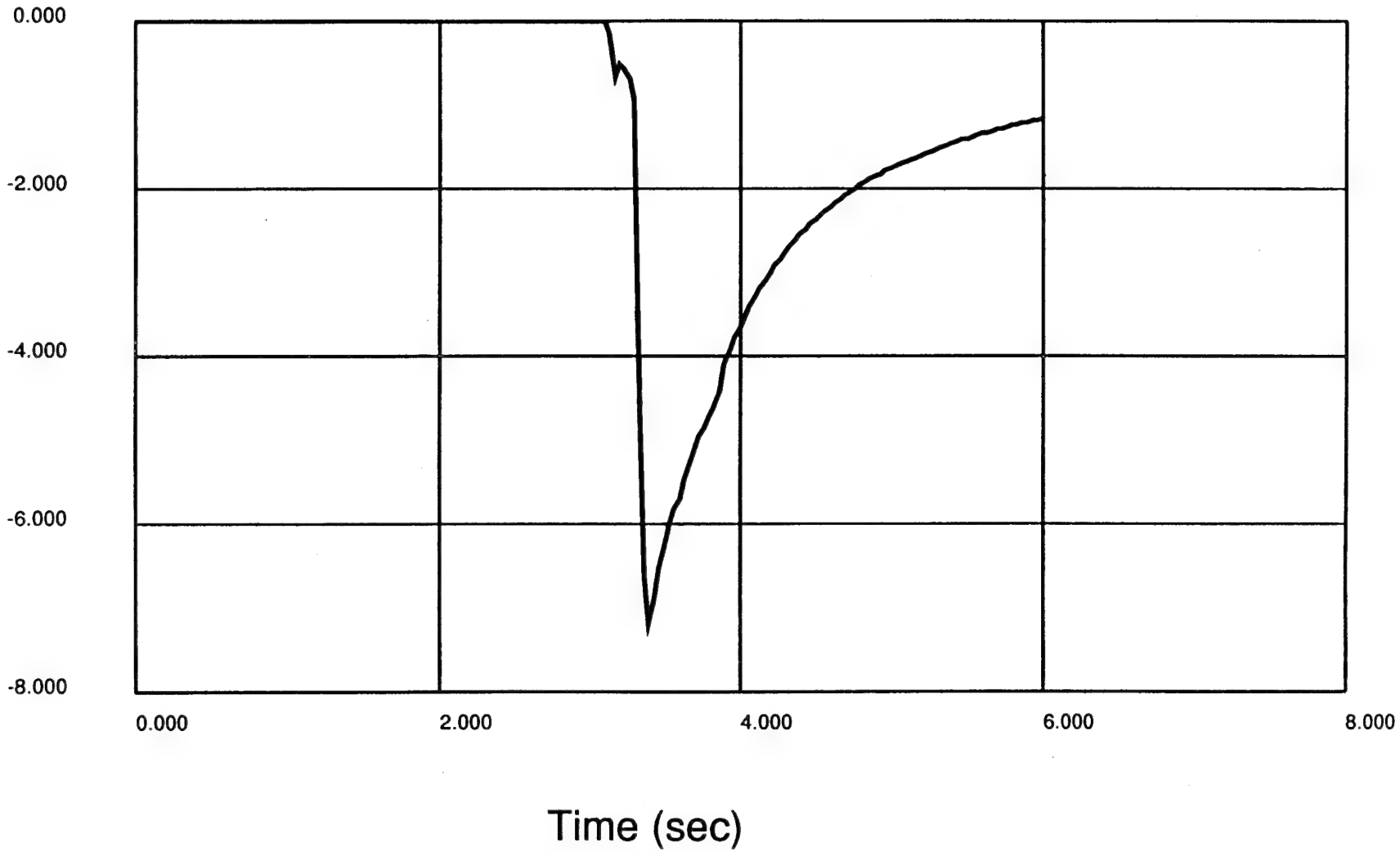
BAP 911101

Req 3001, Col 1, Target Boat Displacement



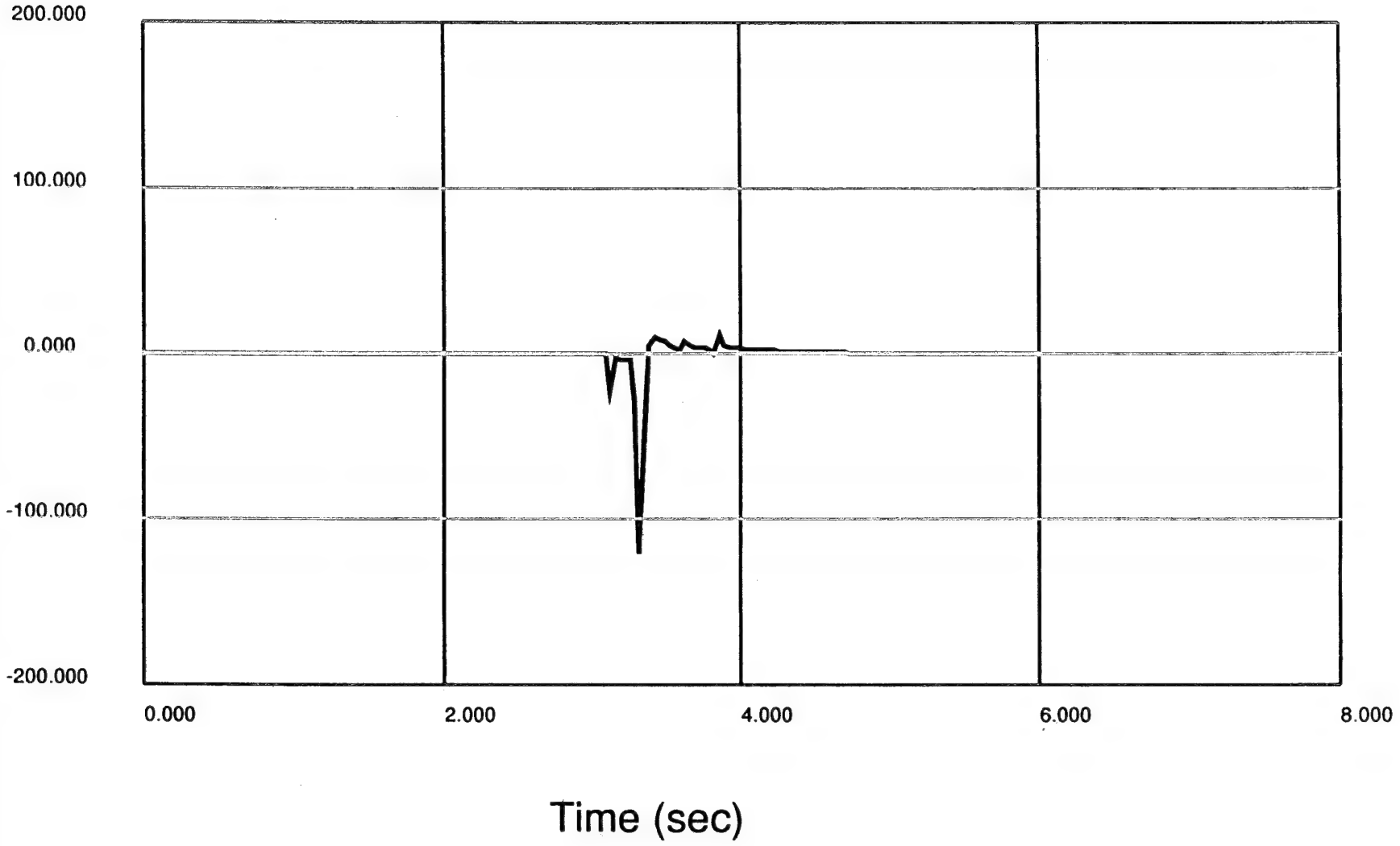
BAP 911101

Req 3002, Col 1, Target Boat Velocity



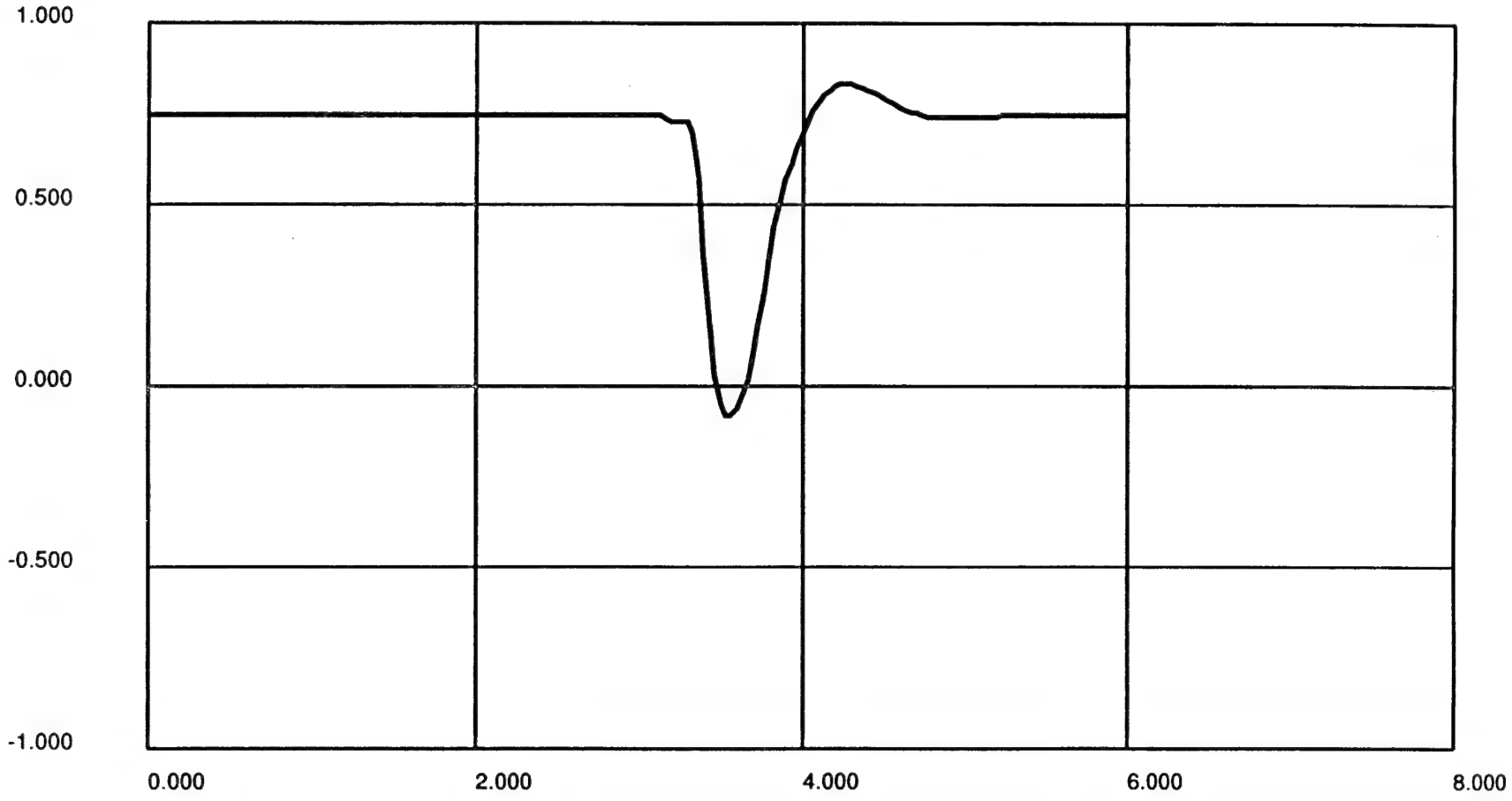
BAP 911101

Req 3003, Col 1, Target Boat Acceleration



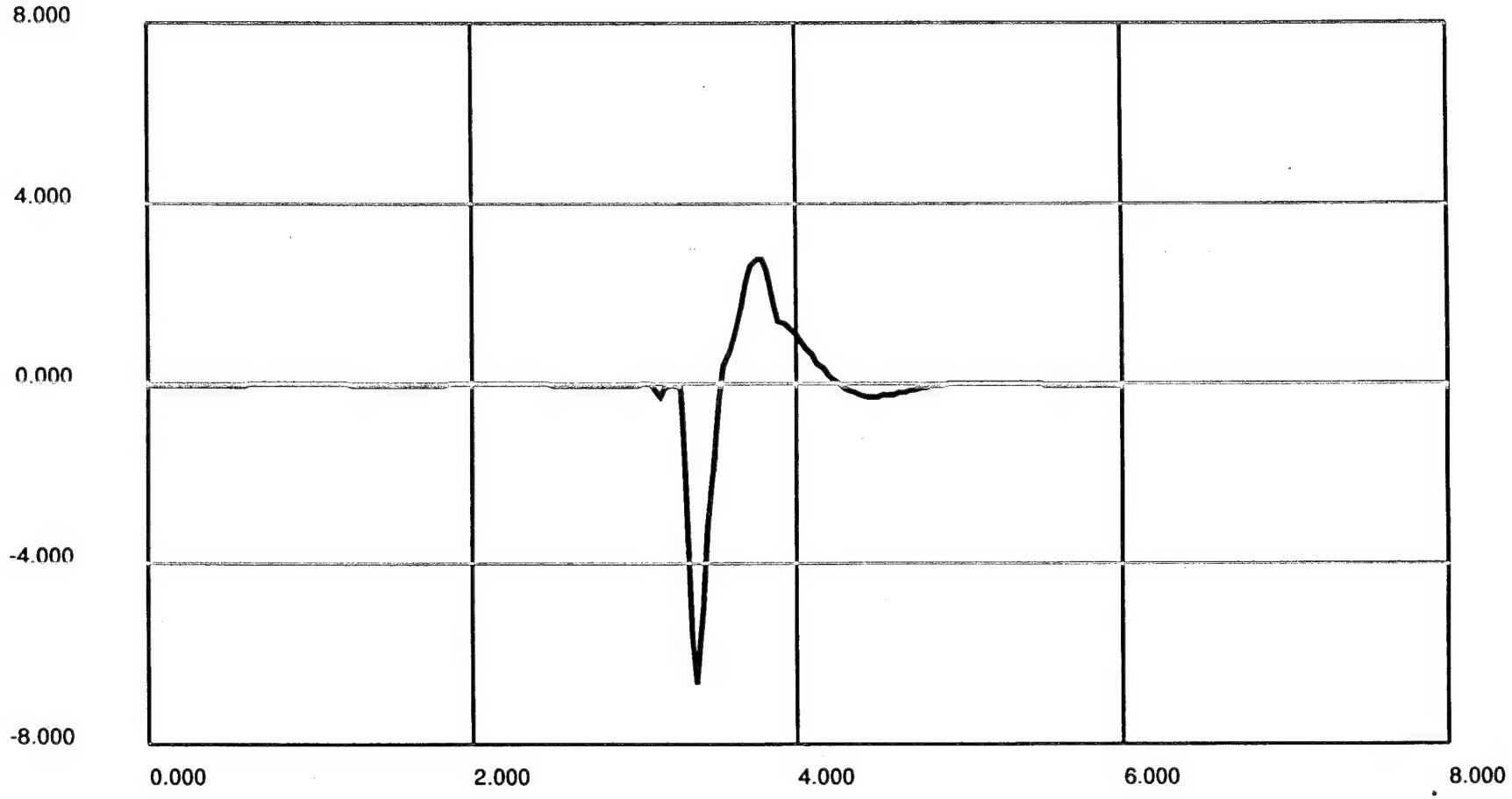
BAP 911101

Req 3001, Col 3, Target Boat Displacement



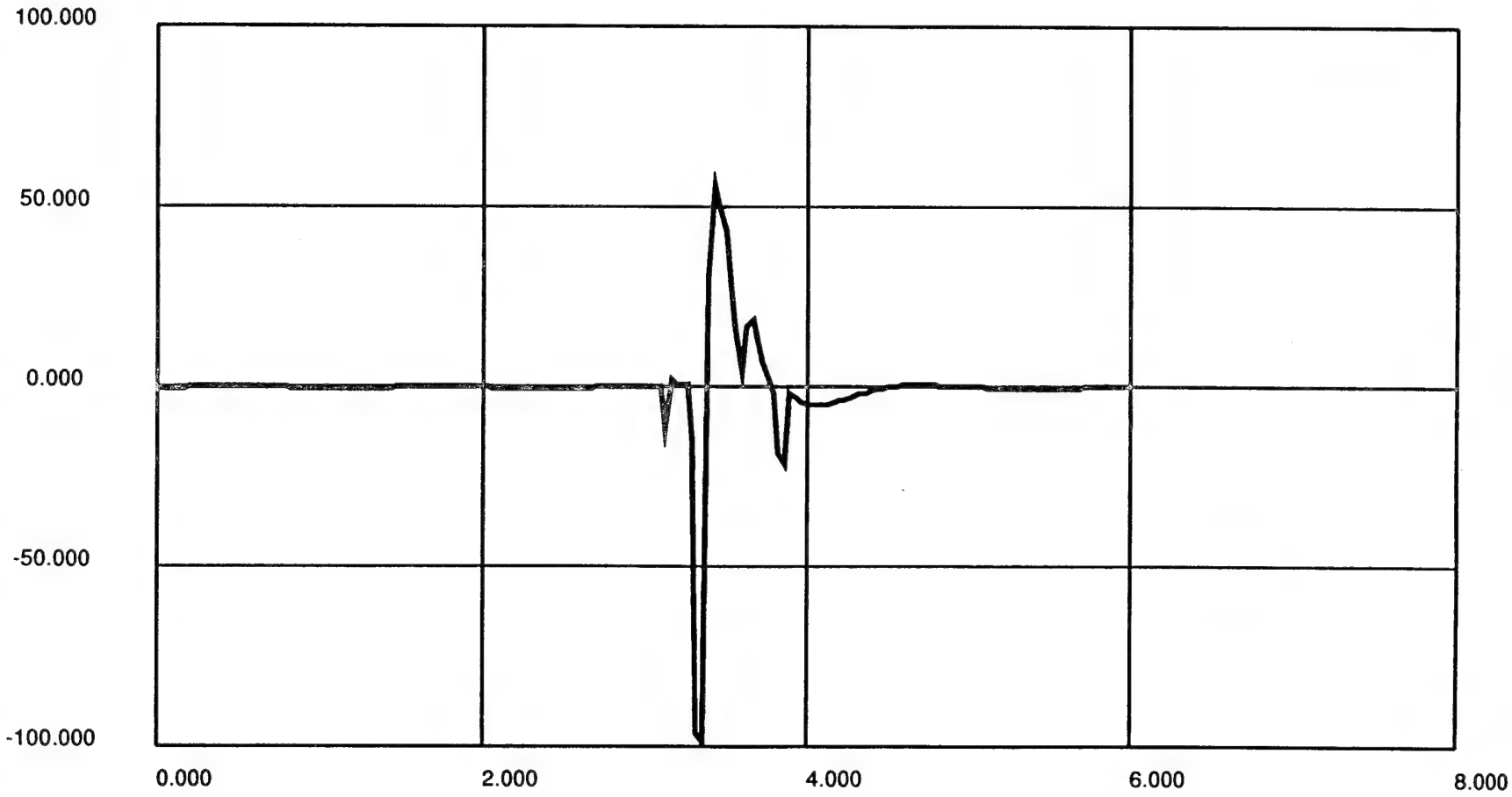
BAP 911101

Req 3002, Col 3, Target Boat Velocity



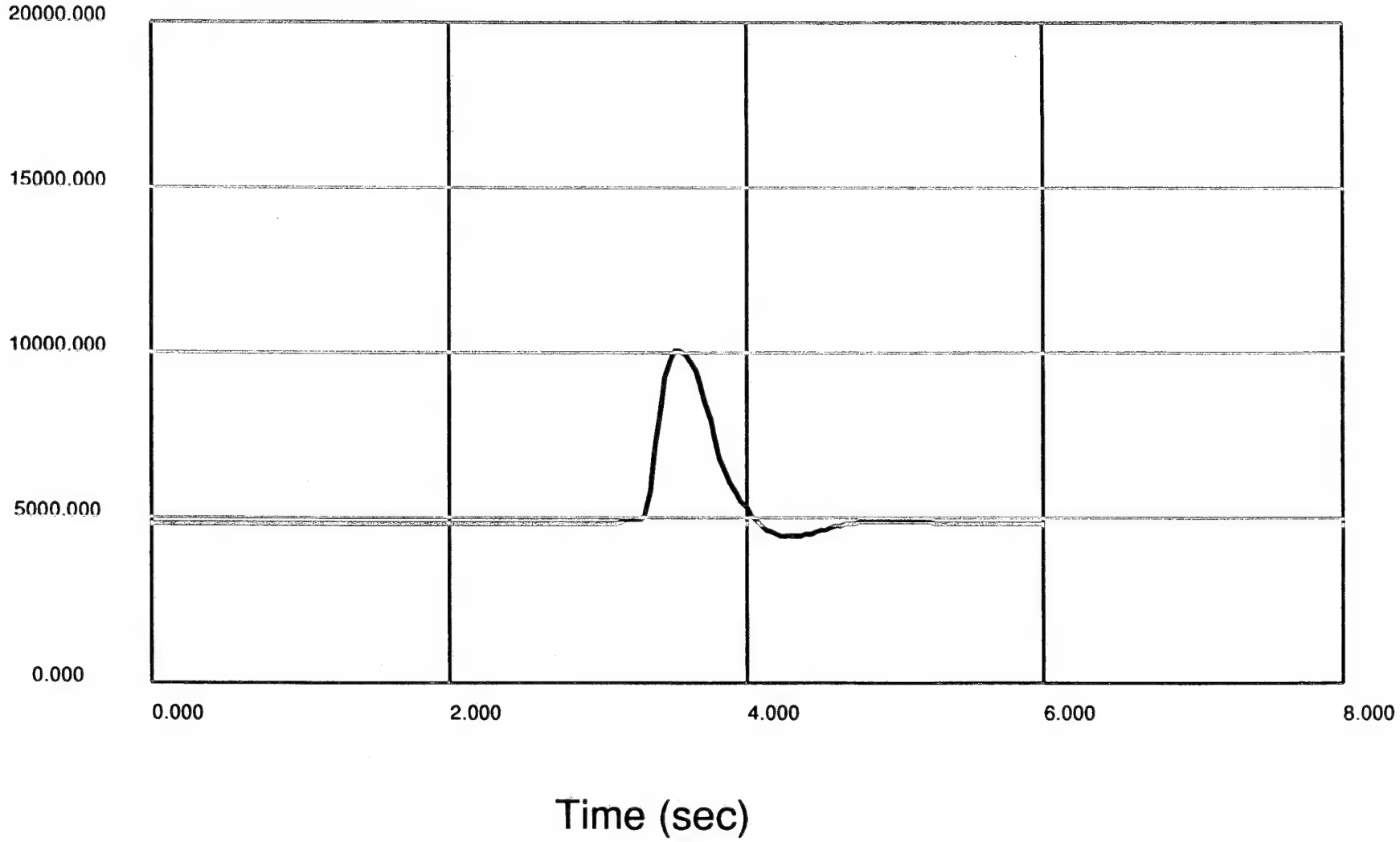
BAP 911101

Req 3003, Col 3, Target Boat Acceleration



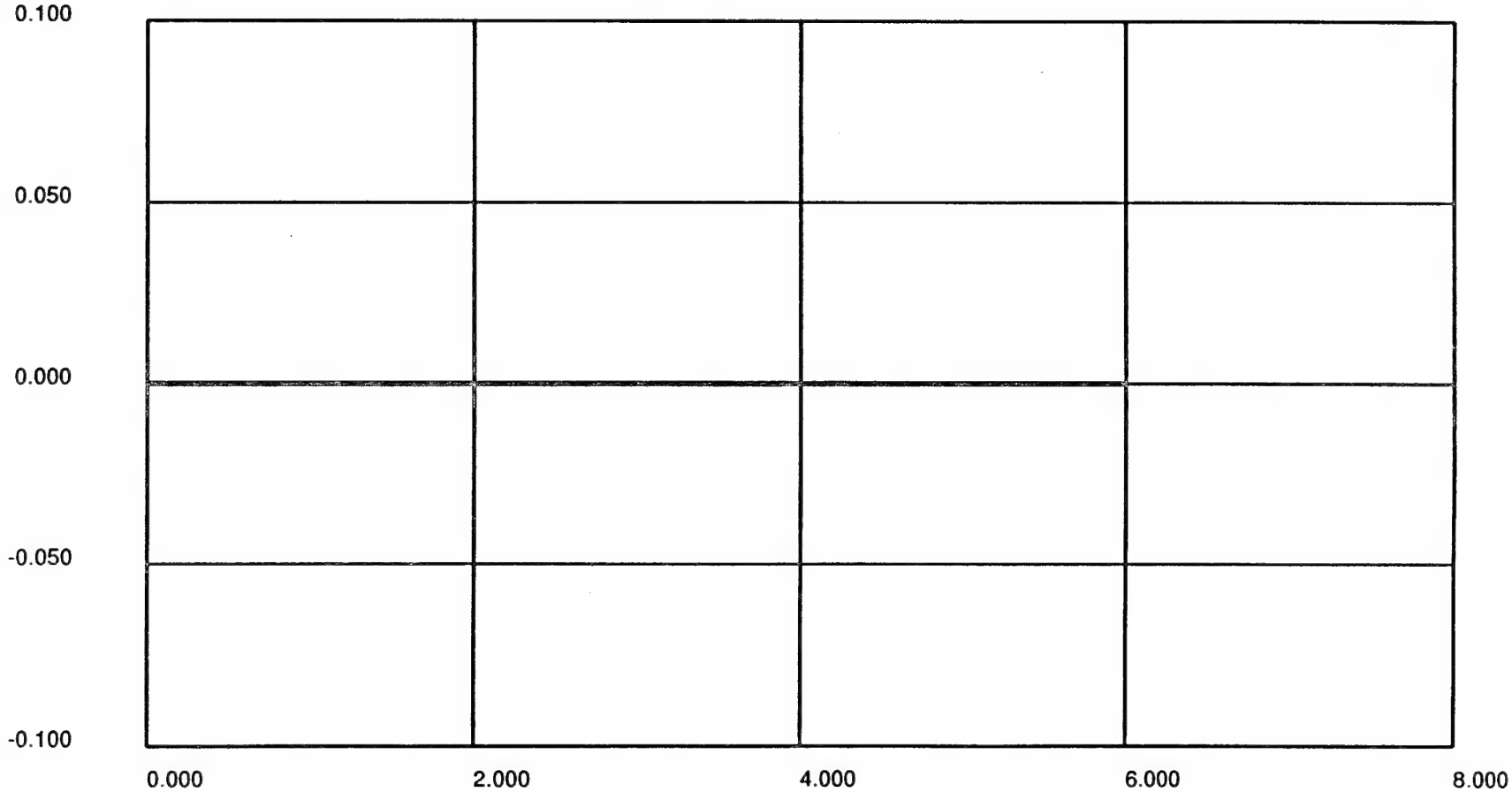
BAP 911101

Req 3004, Col 3, Target Boat Forces



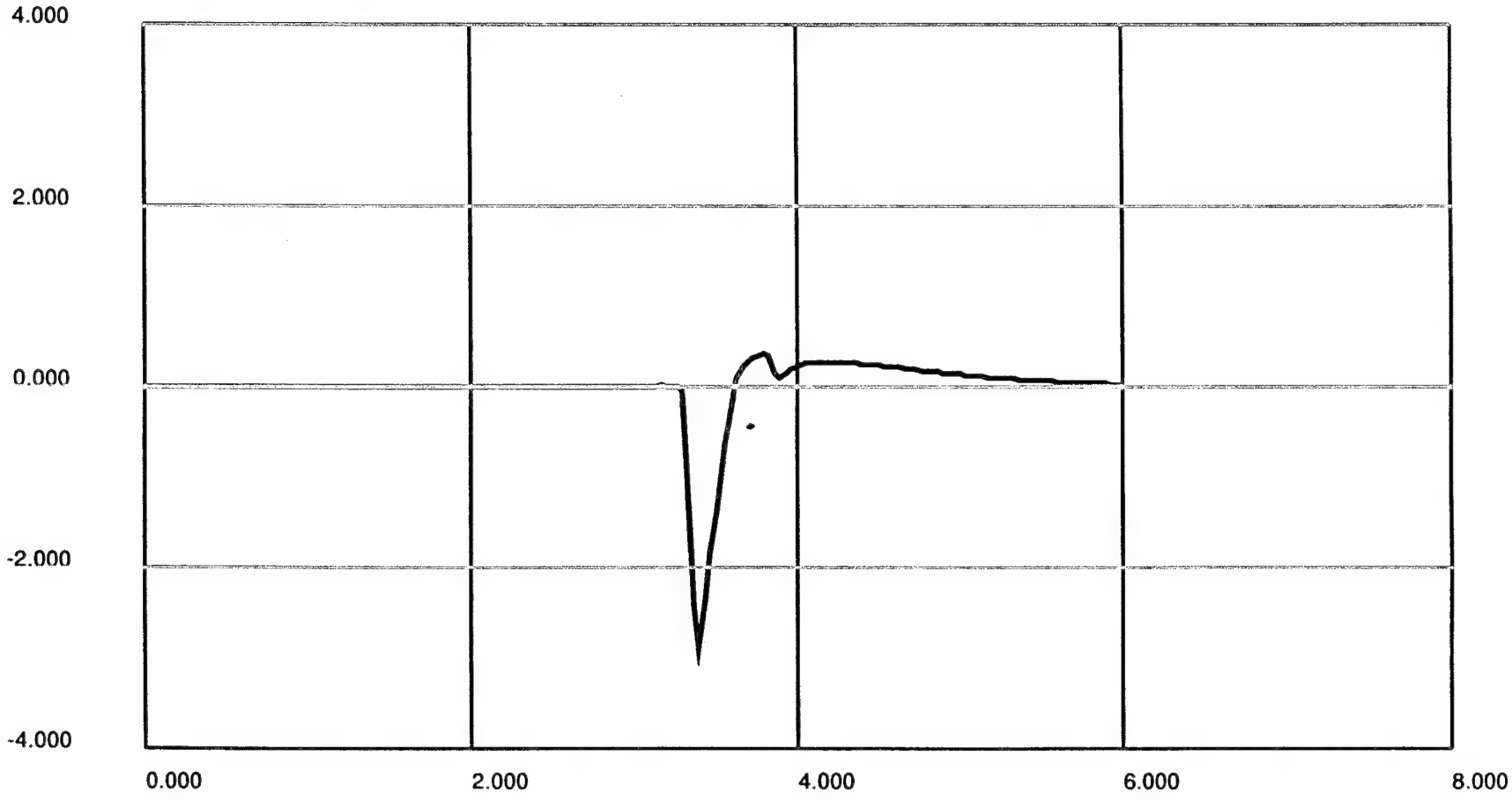
BAP 911101

Req 3001, Col 5, Target Boat Displacement



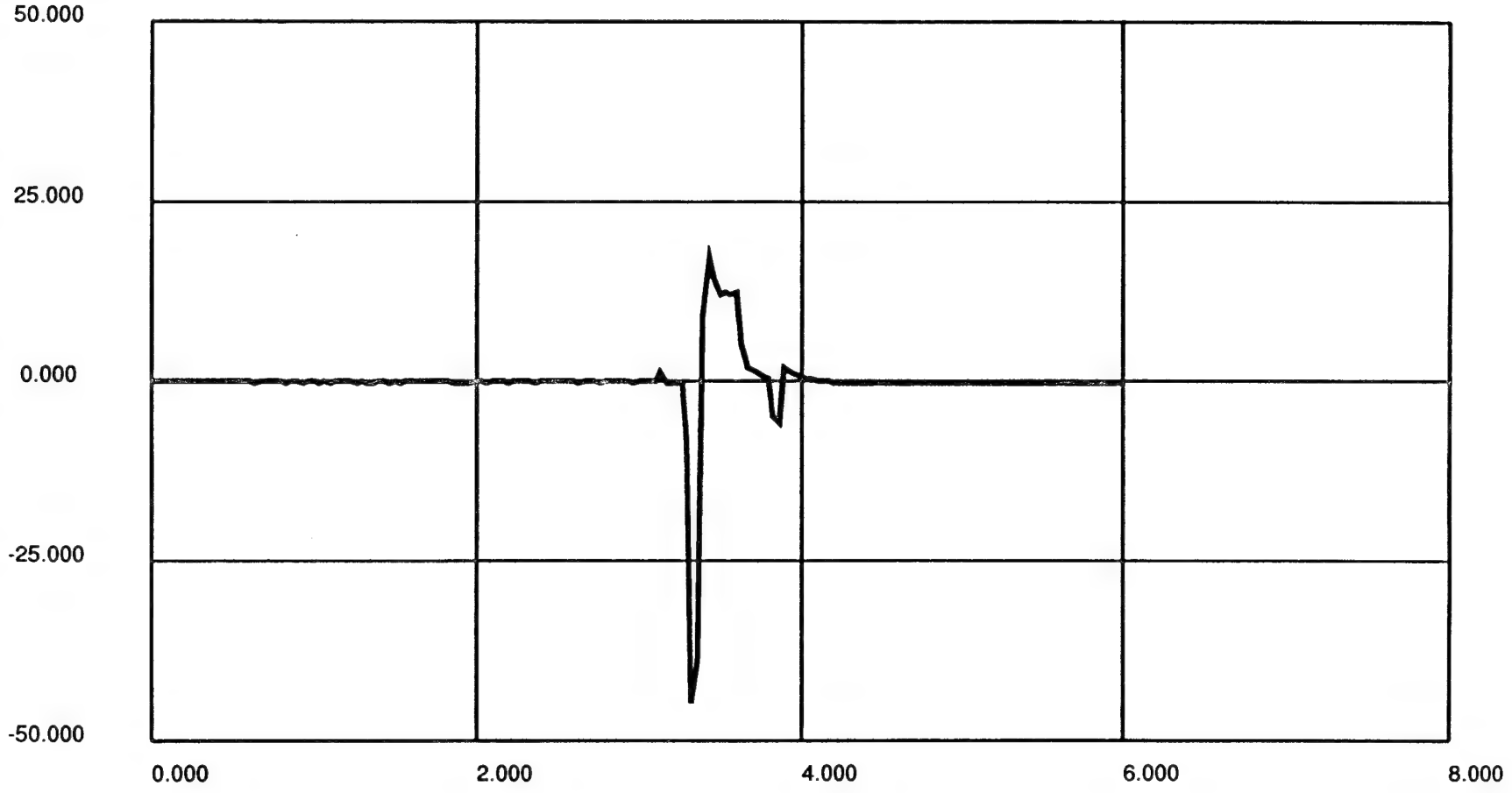
BAP 911101

Req 3002, Col 5, Target Boat Velocity



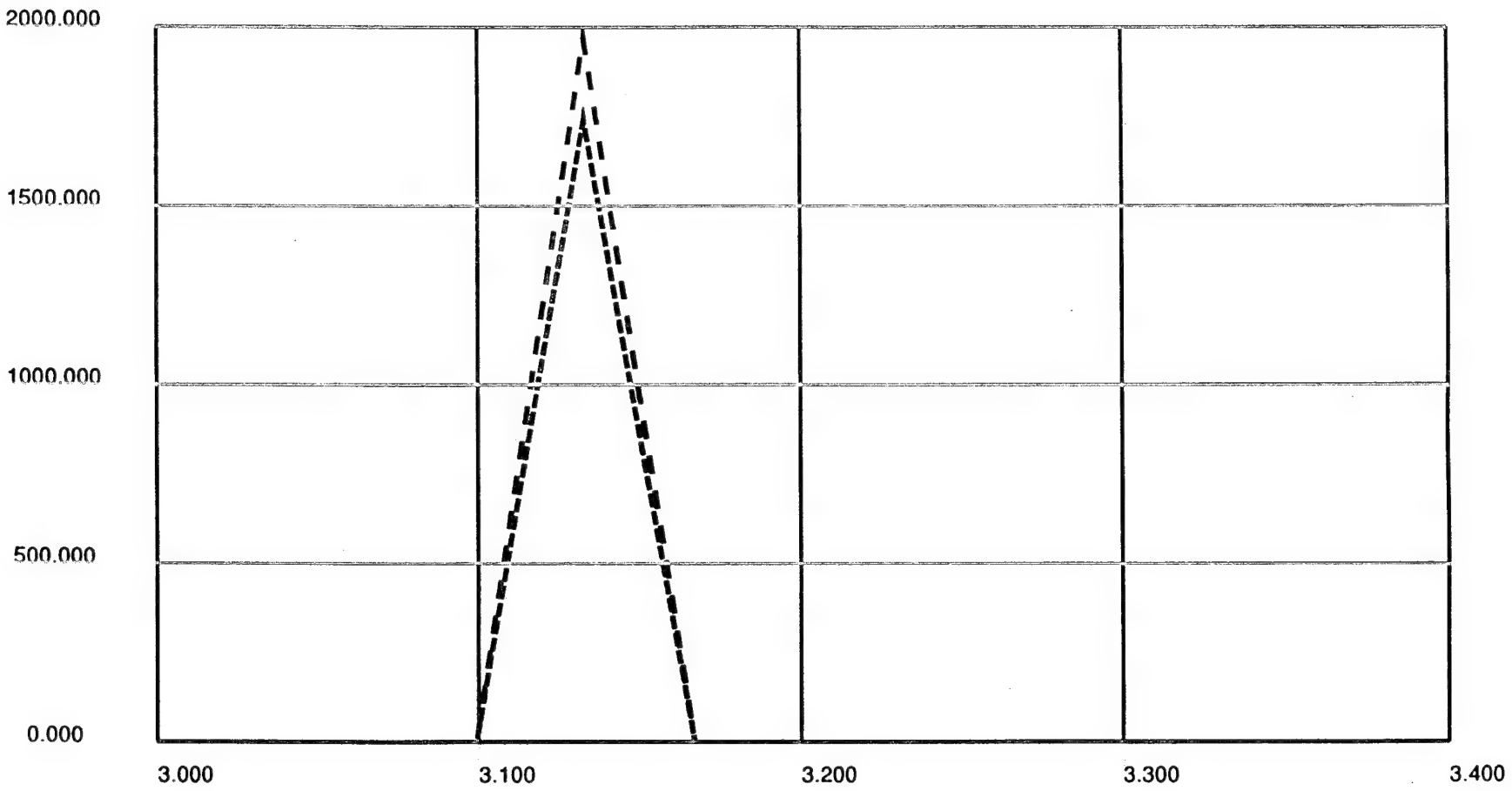
BAP 911101

Req 3003, Col 5, Target Boat Acceleration



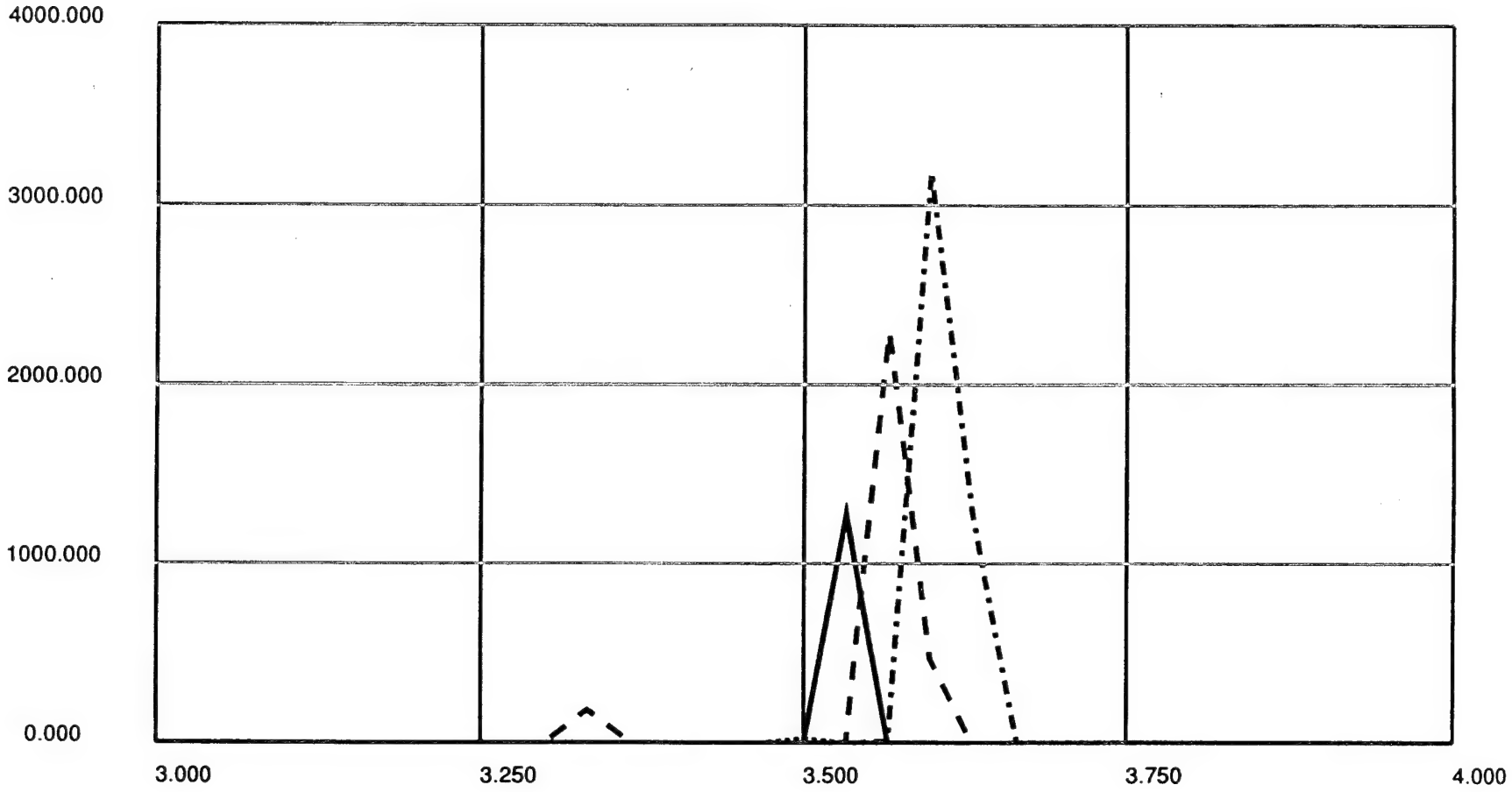
BAP 911101

Port Gunwale Impact Forces



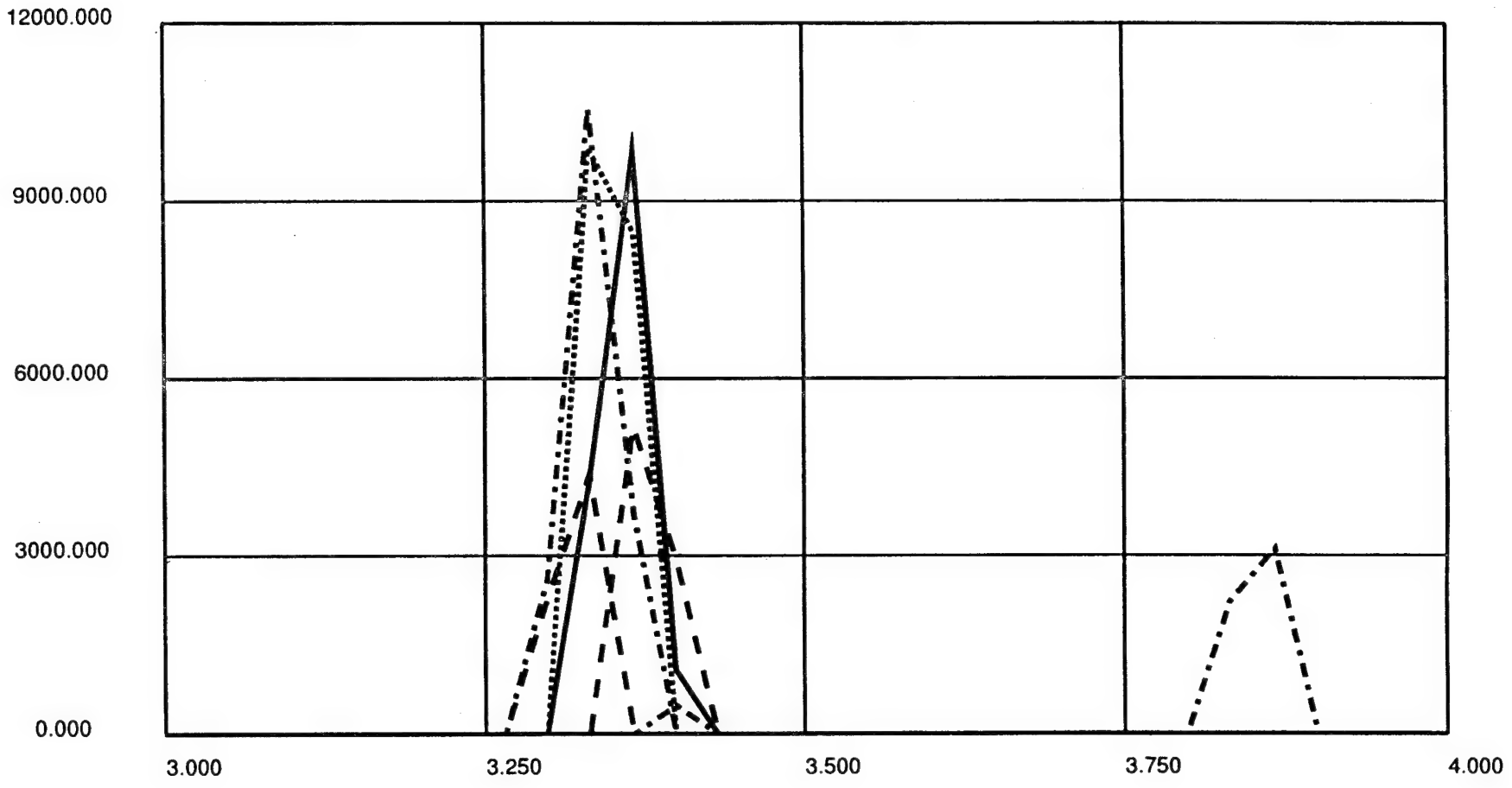
BAP 911101

Port Chine Impact Forces



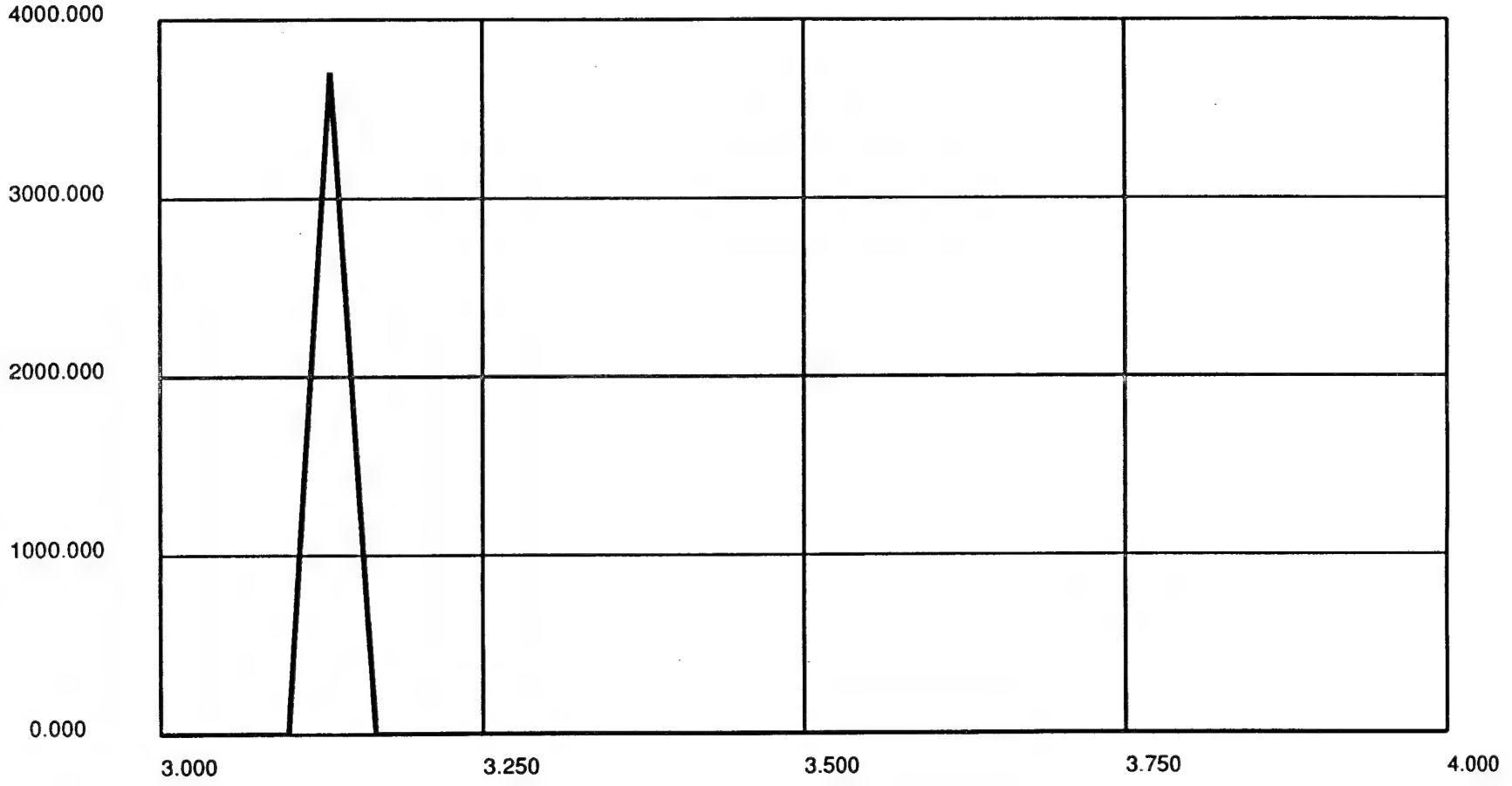
BAP 911101

Starboard Gunwale Impact Forces



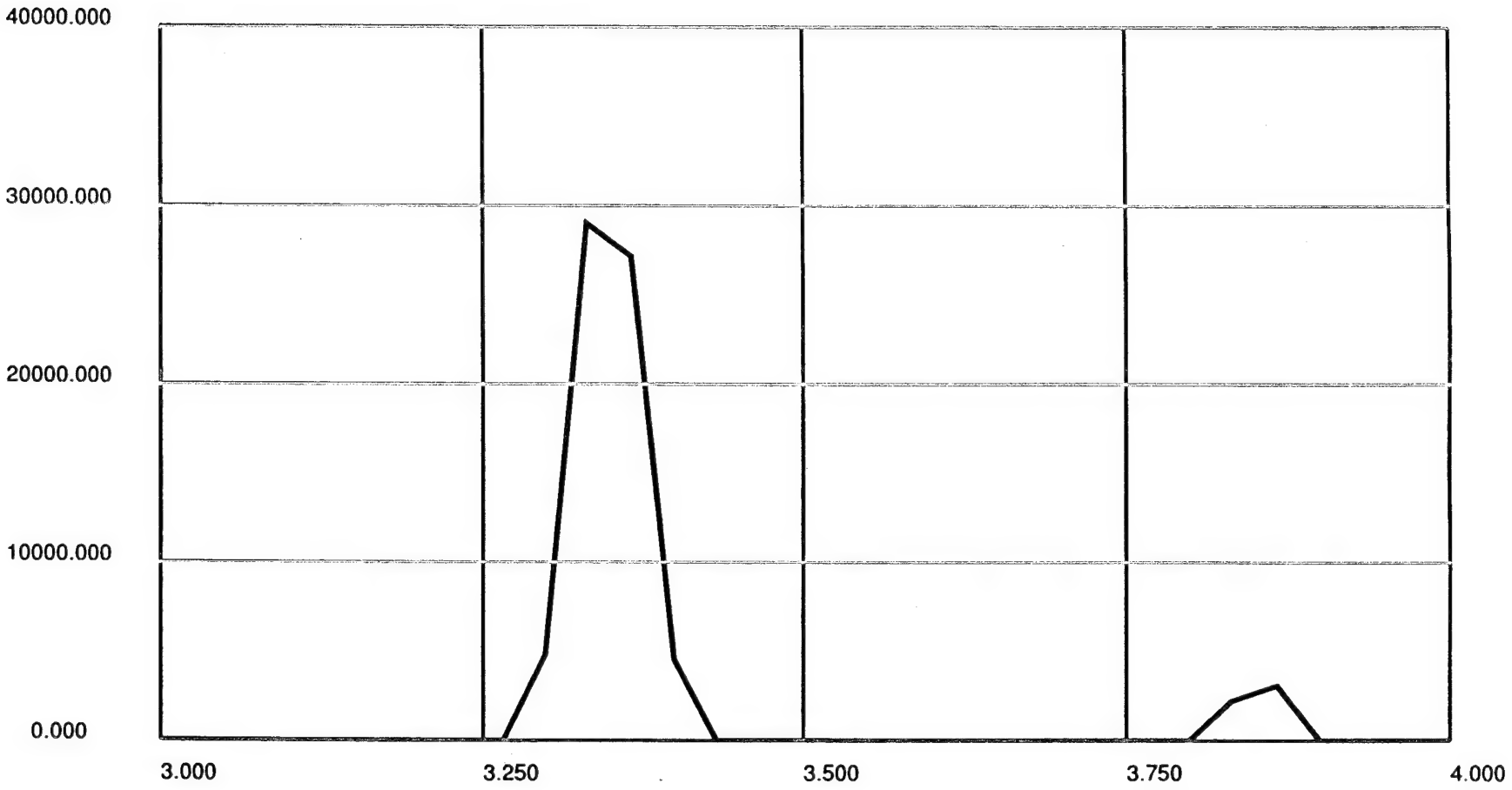
BAP 911101

Total Port Gunwale Impact Force



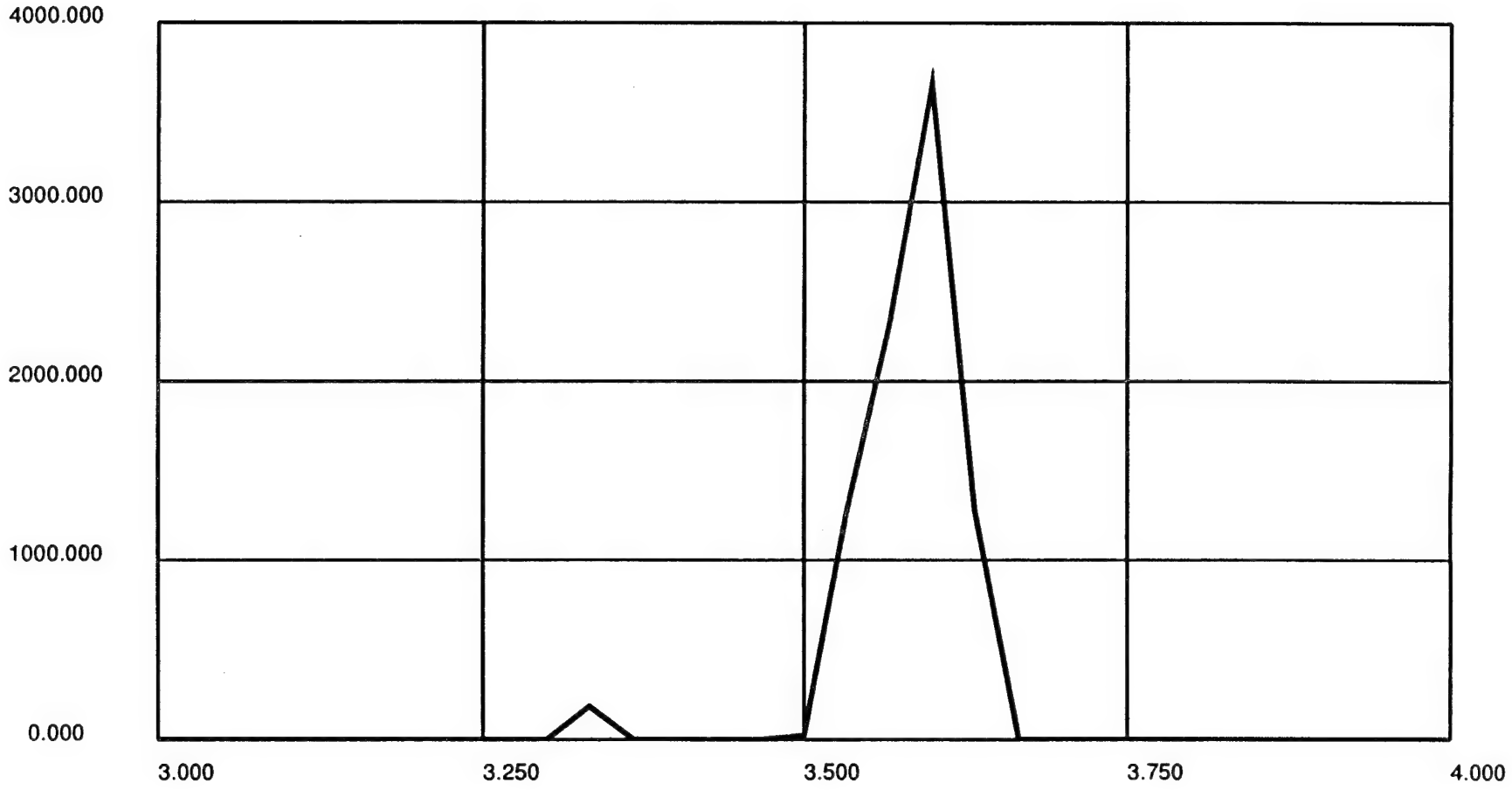
BAP 911101

Total Starboard Gunwale Impact Force



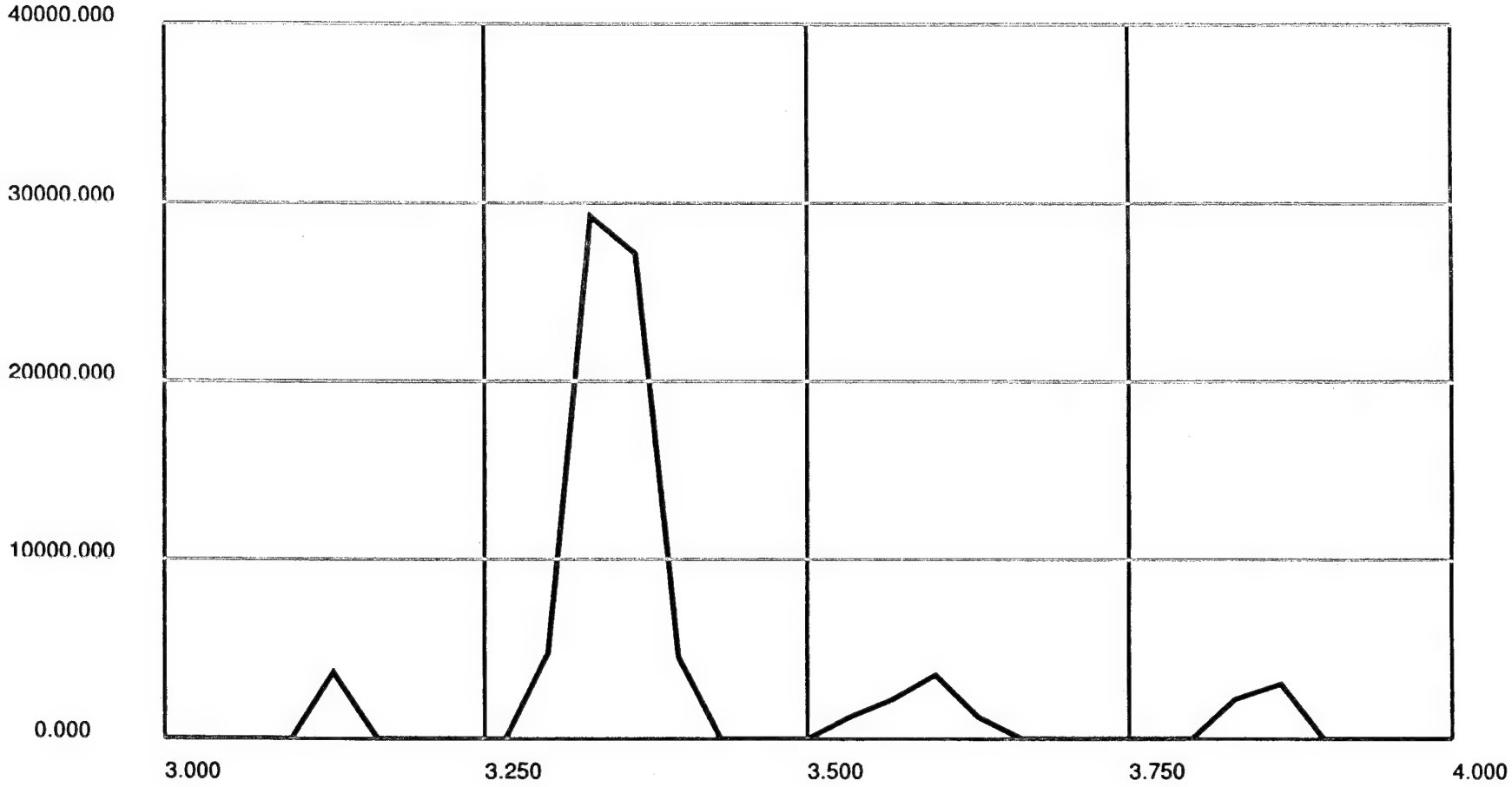
BAP 911101

Total Port Chine Impact Force



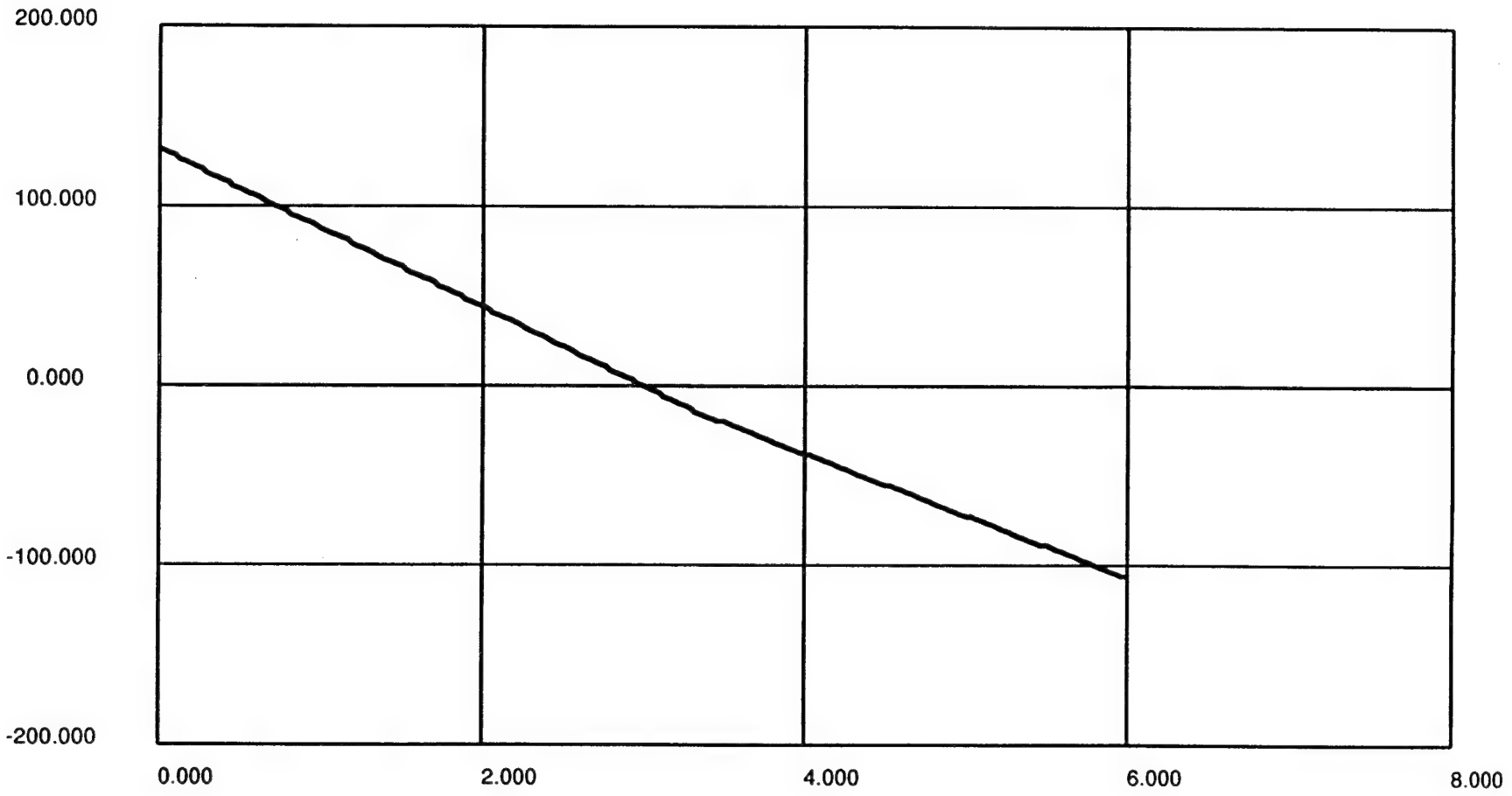
BAP 911101

Total Impact Force



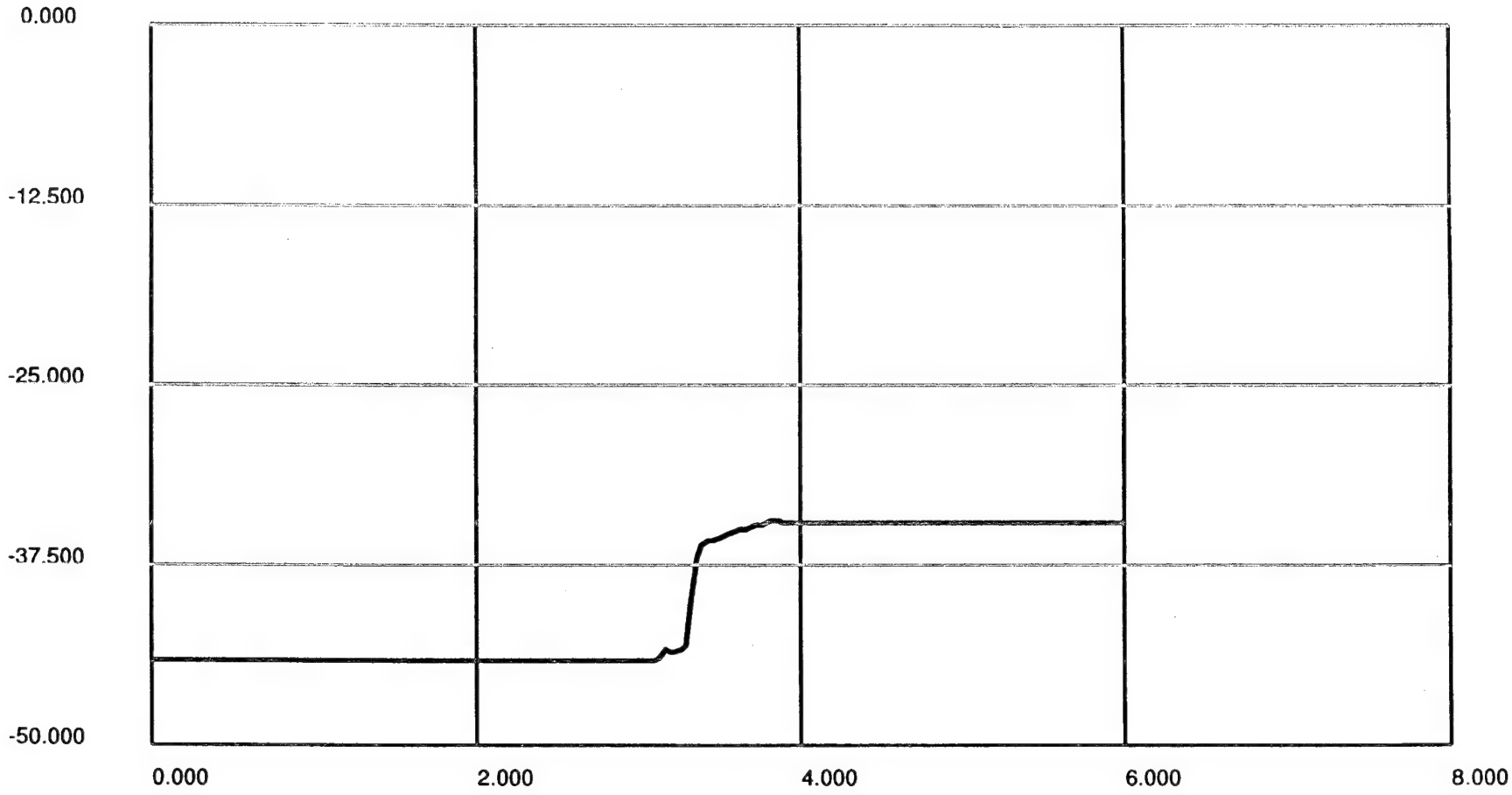
BAP 911101

Req 2001, Col 1, Bullet Boat Displacement



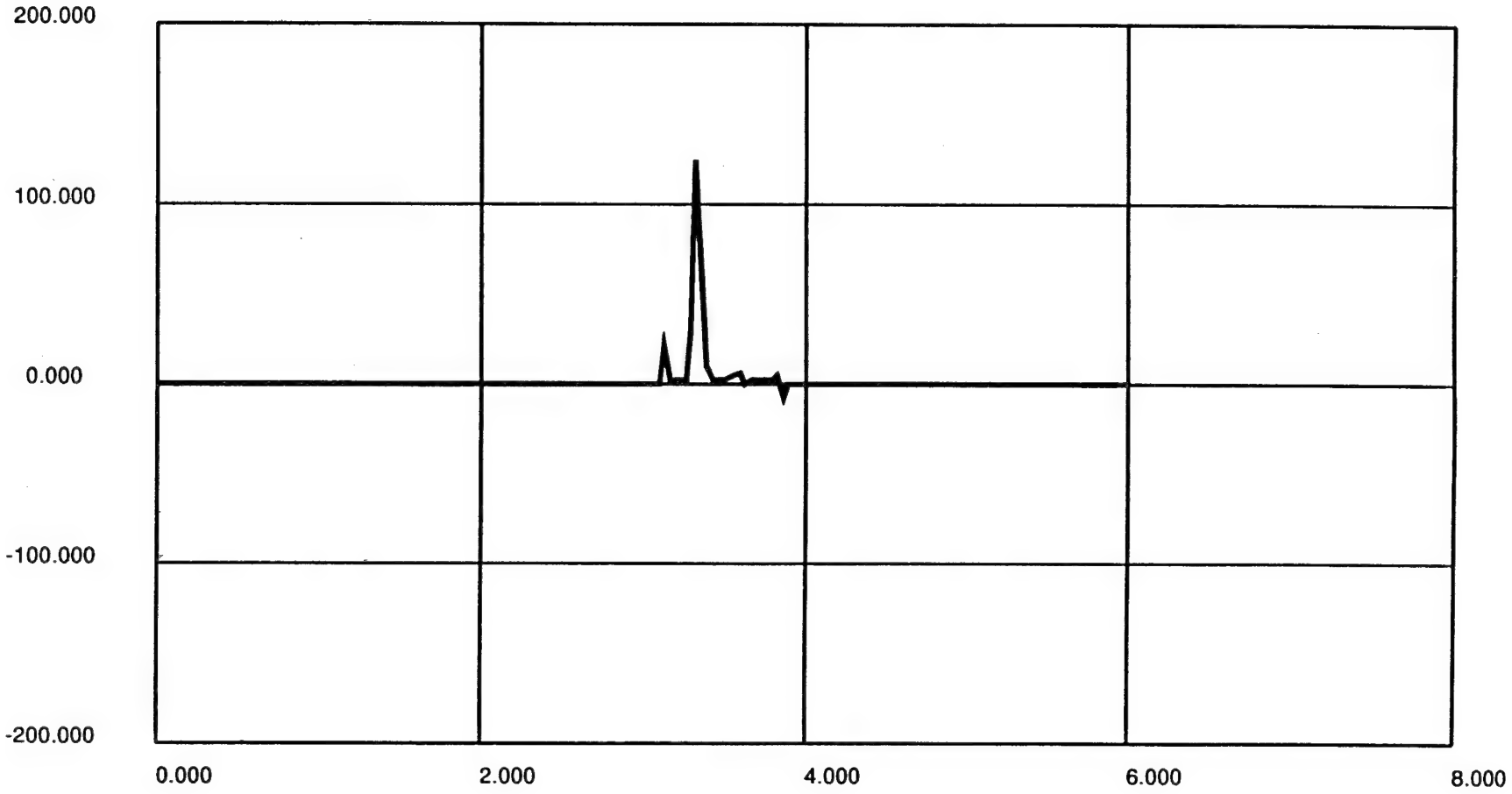
BAP 911101

Req 2002, Col 1, Bullet Boat Velocity



BAP 911101

Req 2003, Col 1, Bullet Boat Acceleration



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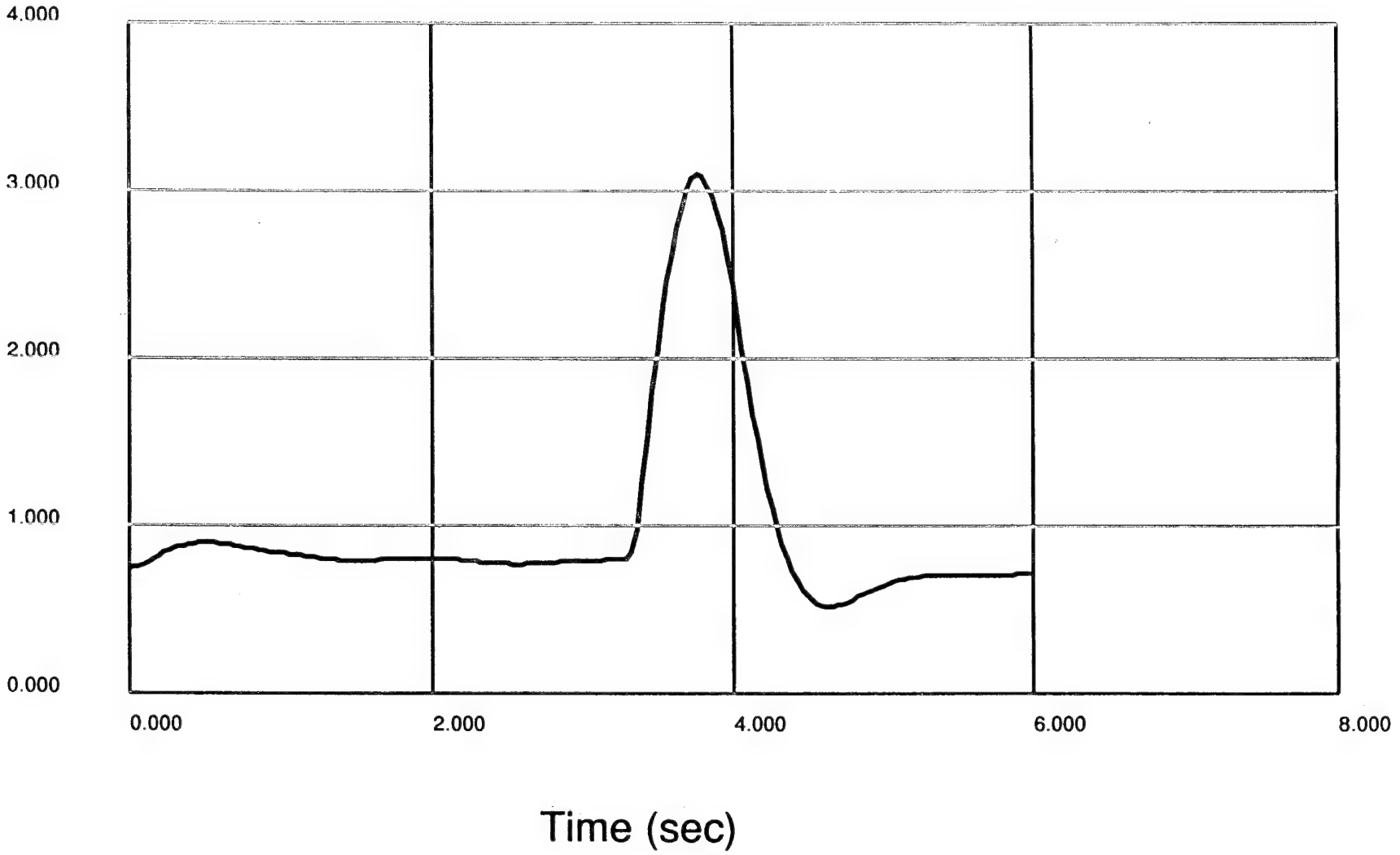

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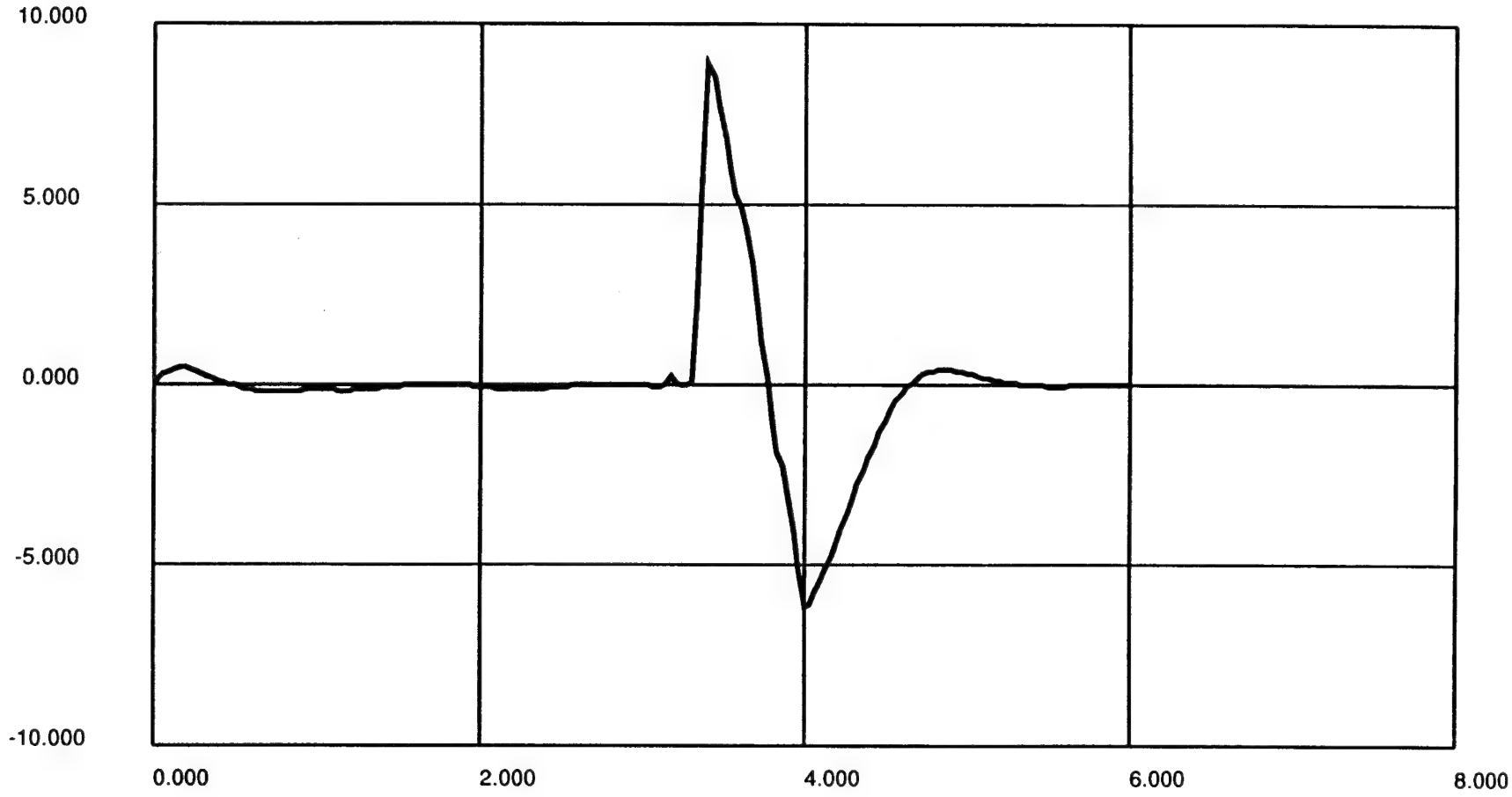

BAP 911101

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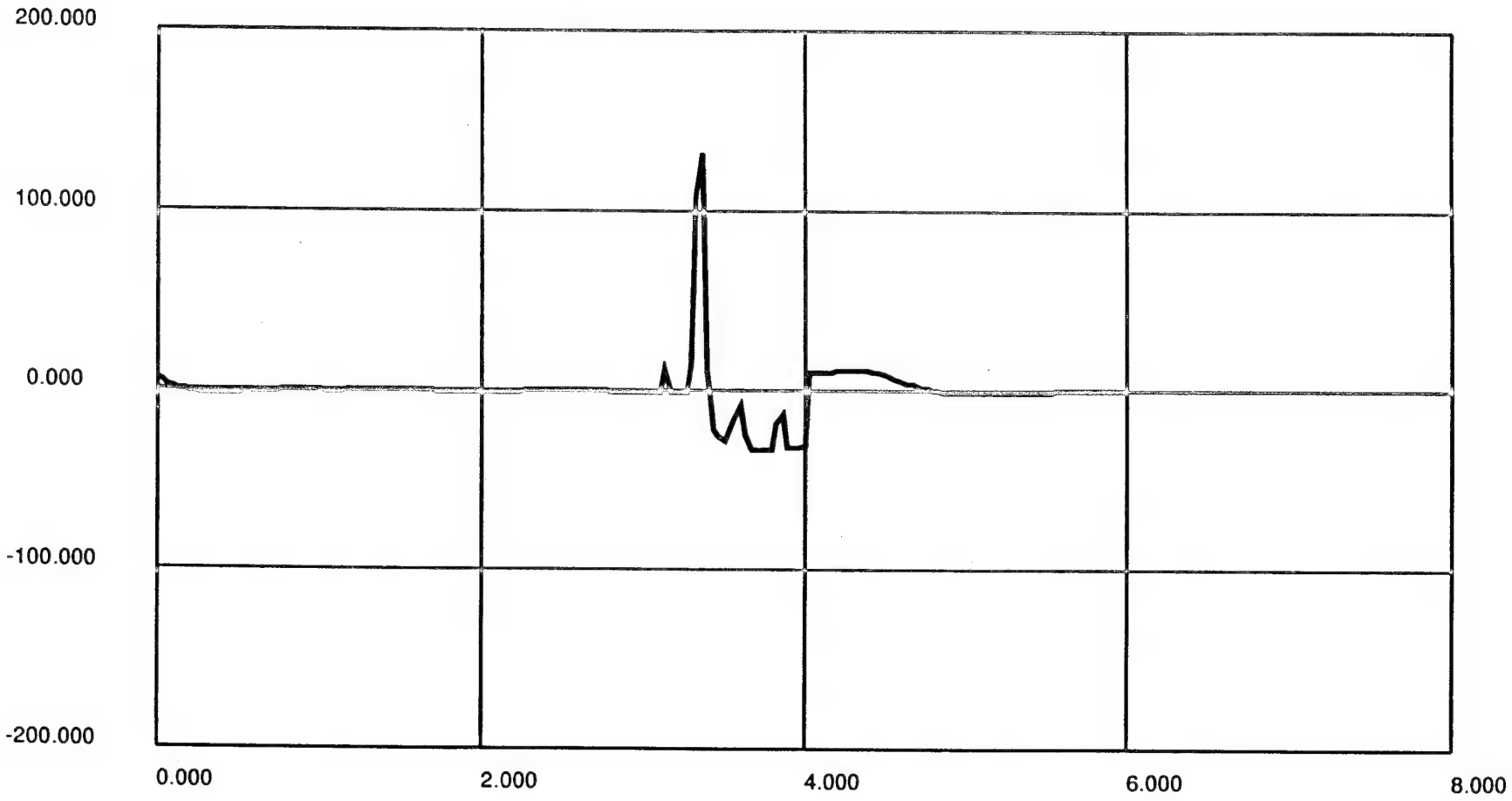

BAP 911101

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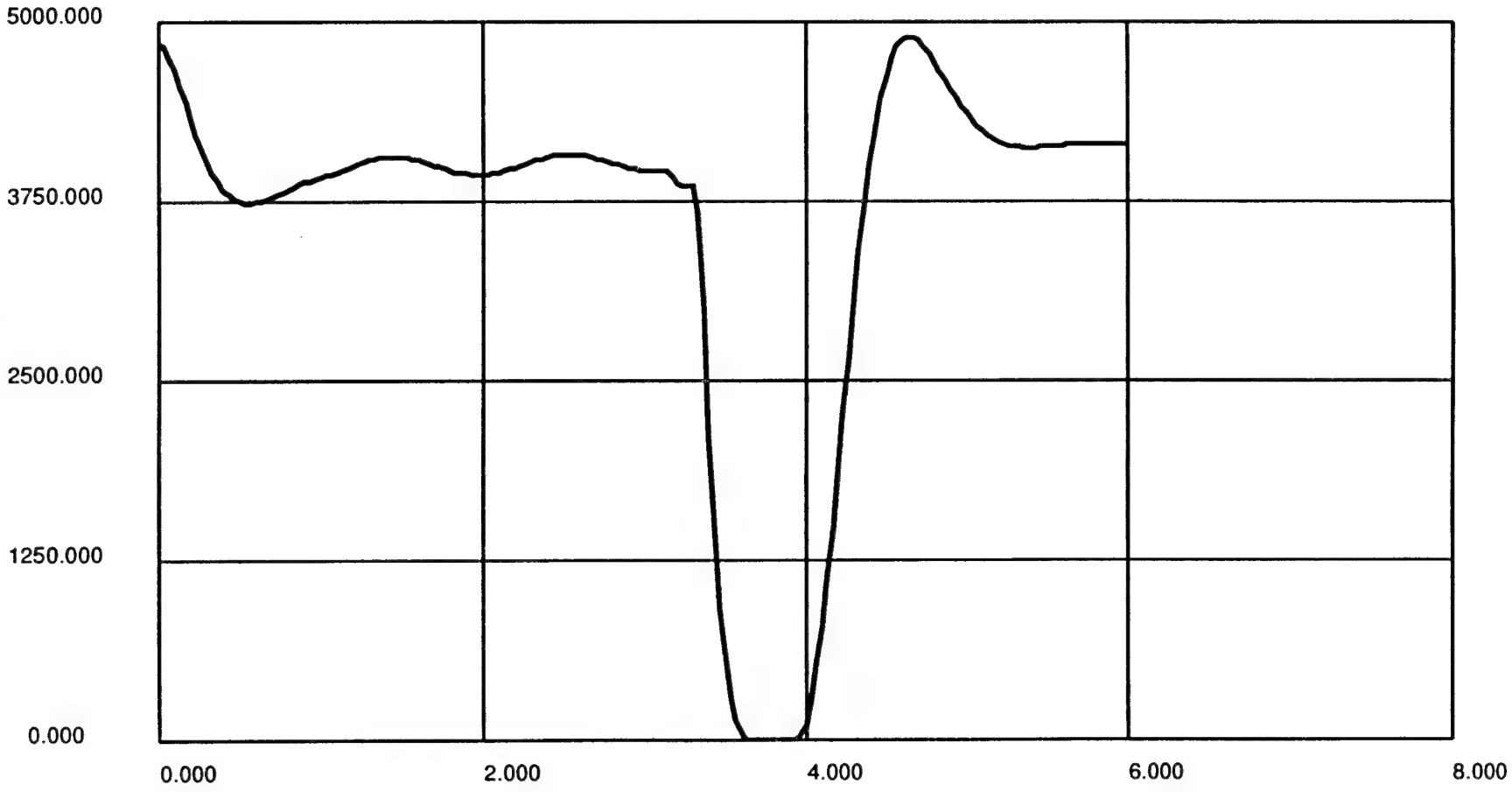

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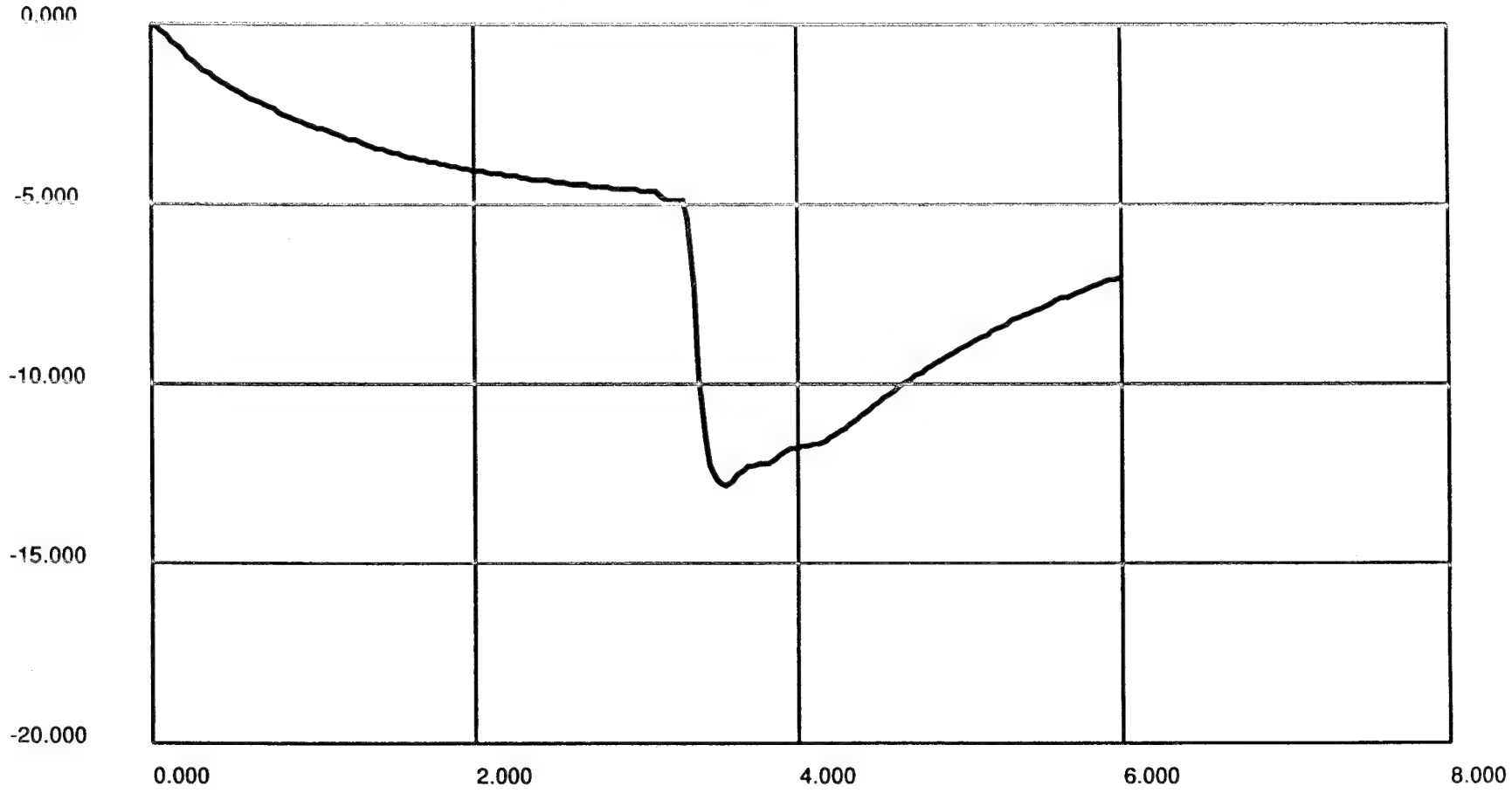

BAP 911101

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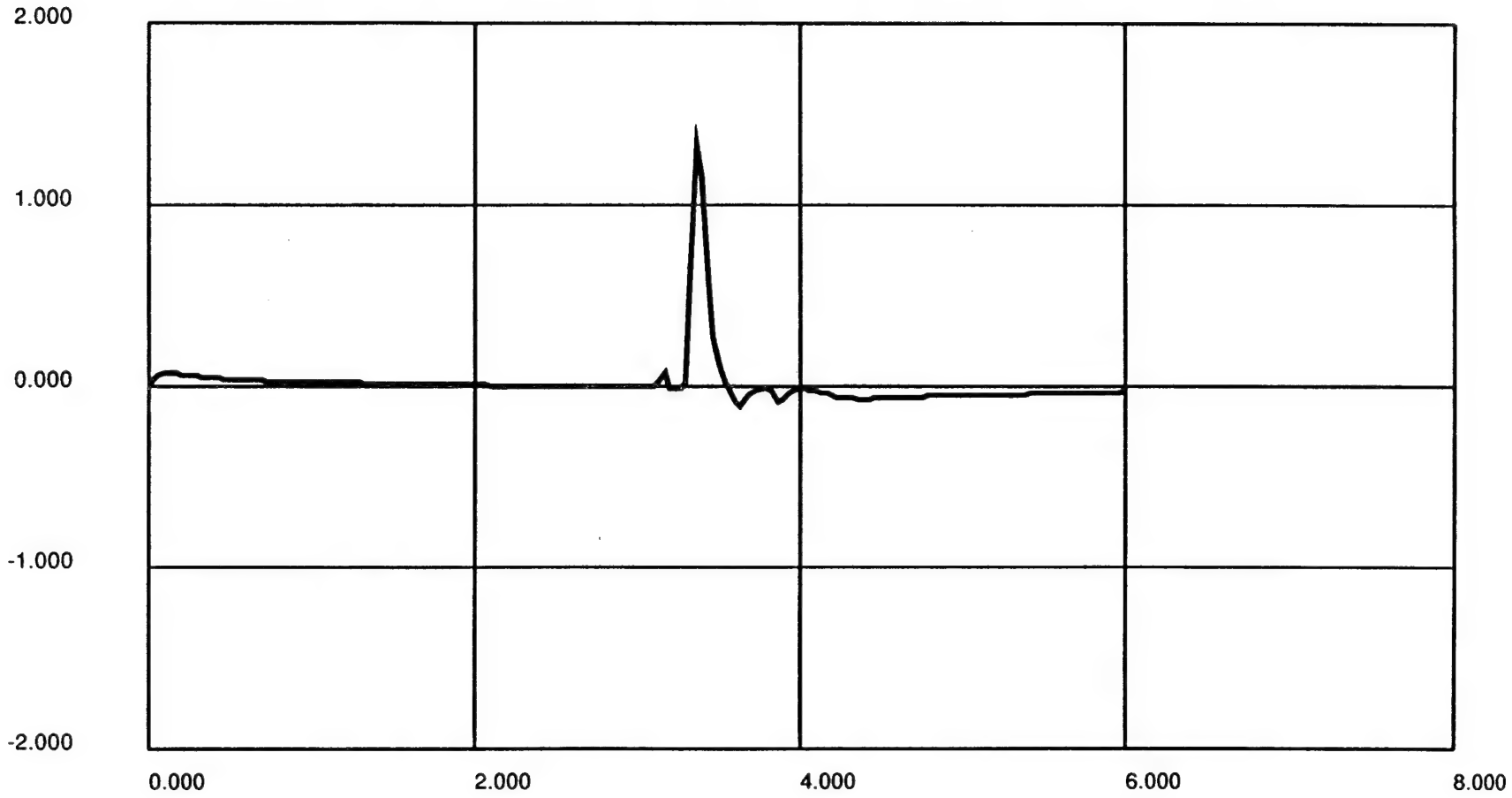

BAP 911101

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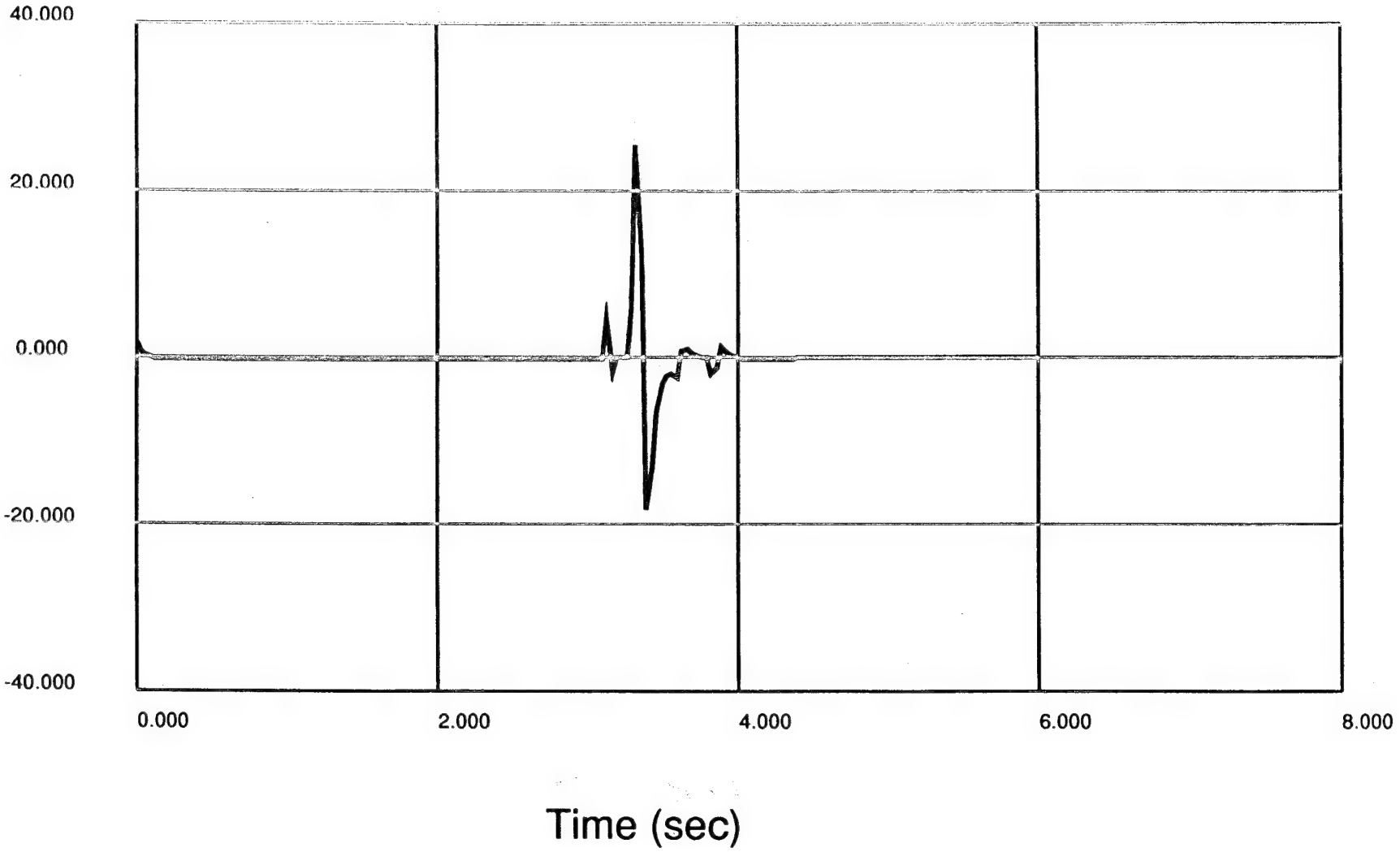
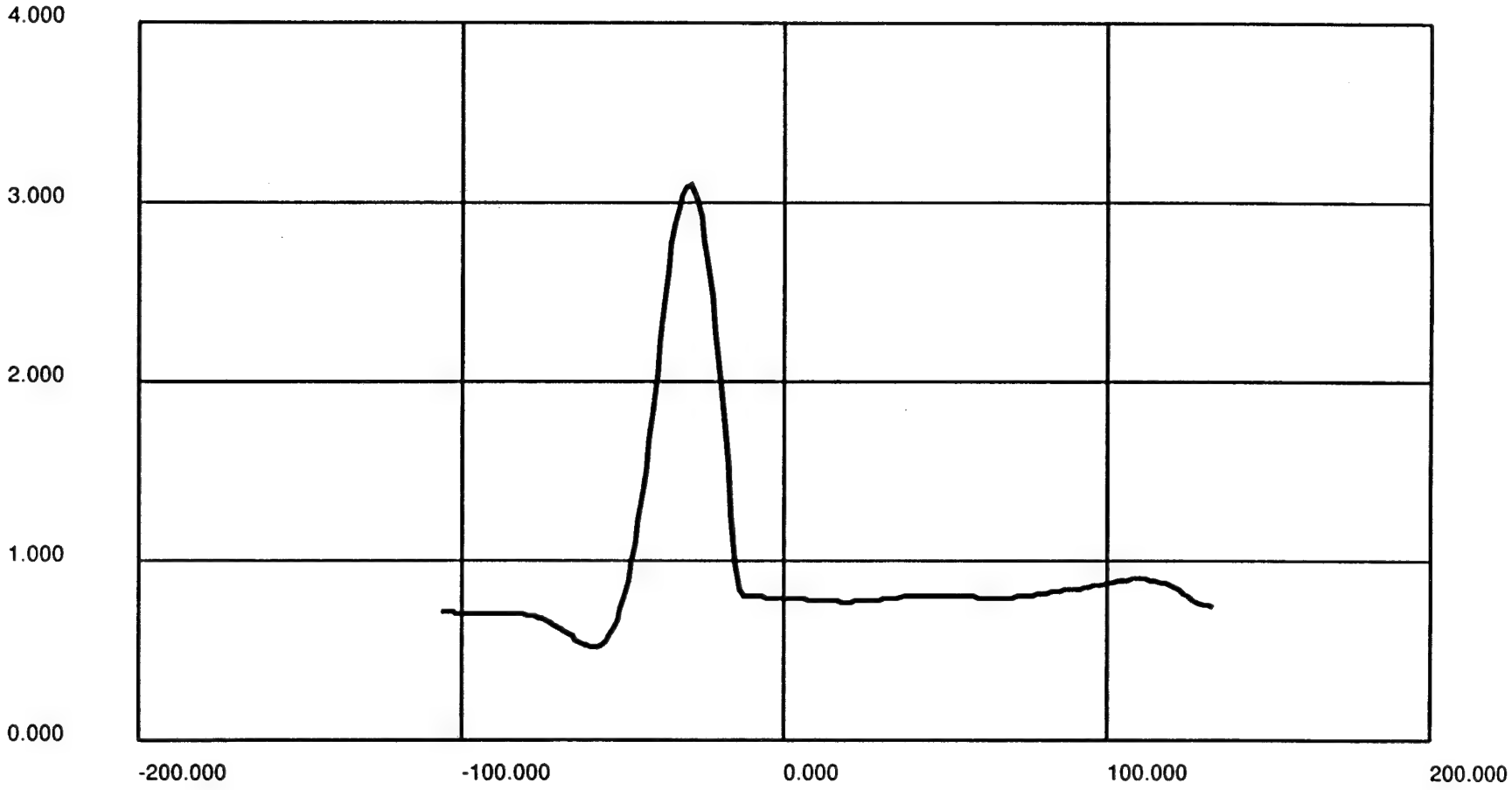


BAP 911101

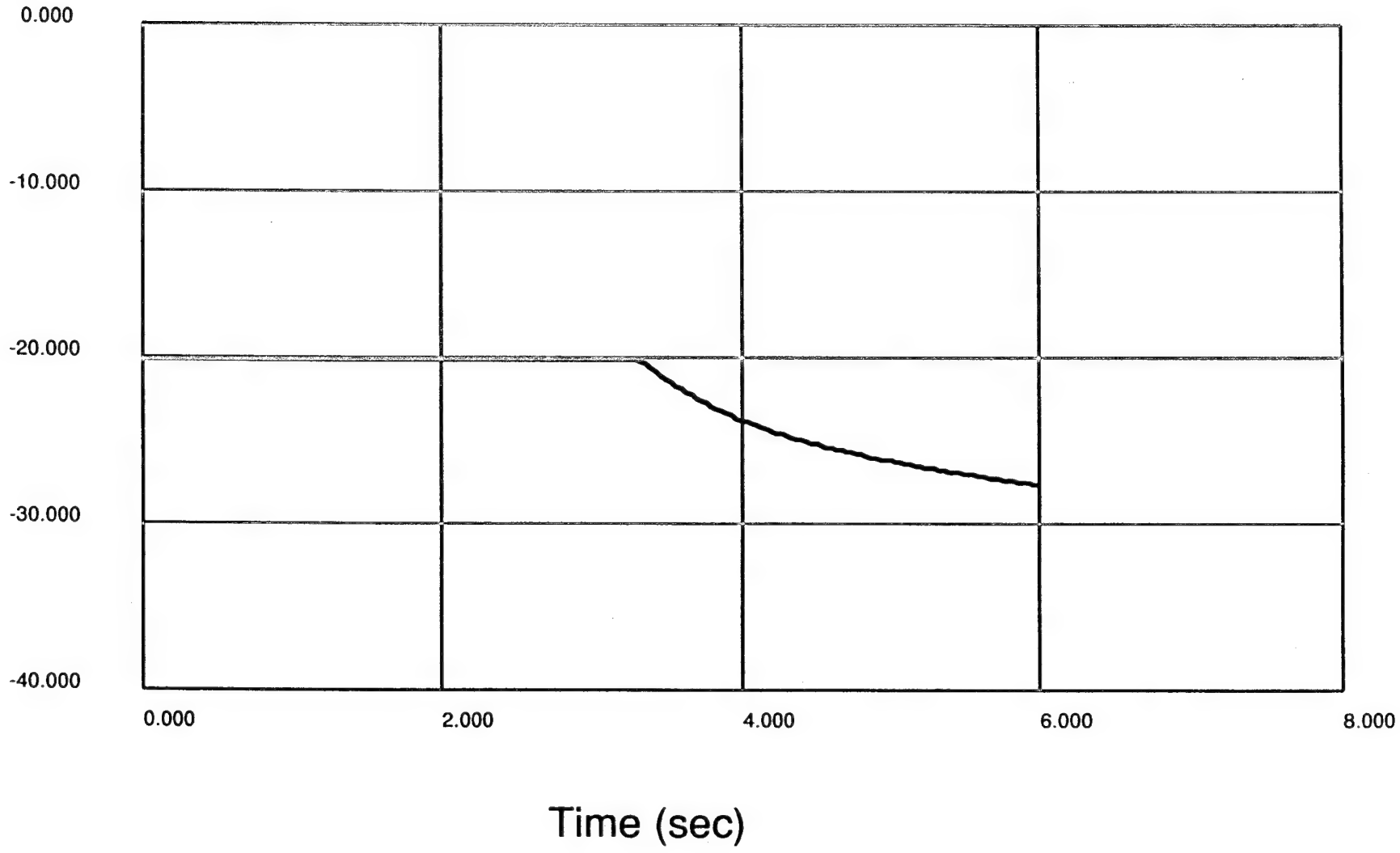
Req 2001, Col 1, Bullet Boat Displacement
Req 2001, Col 3, Bullet Boat Displacement



Bullet Boat CG Trajectory

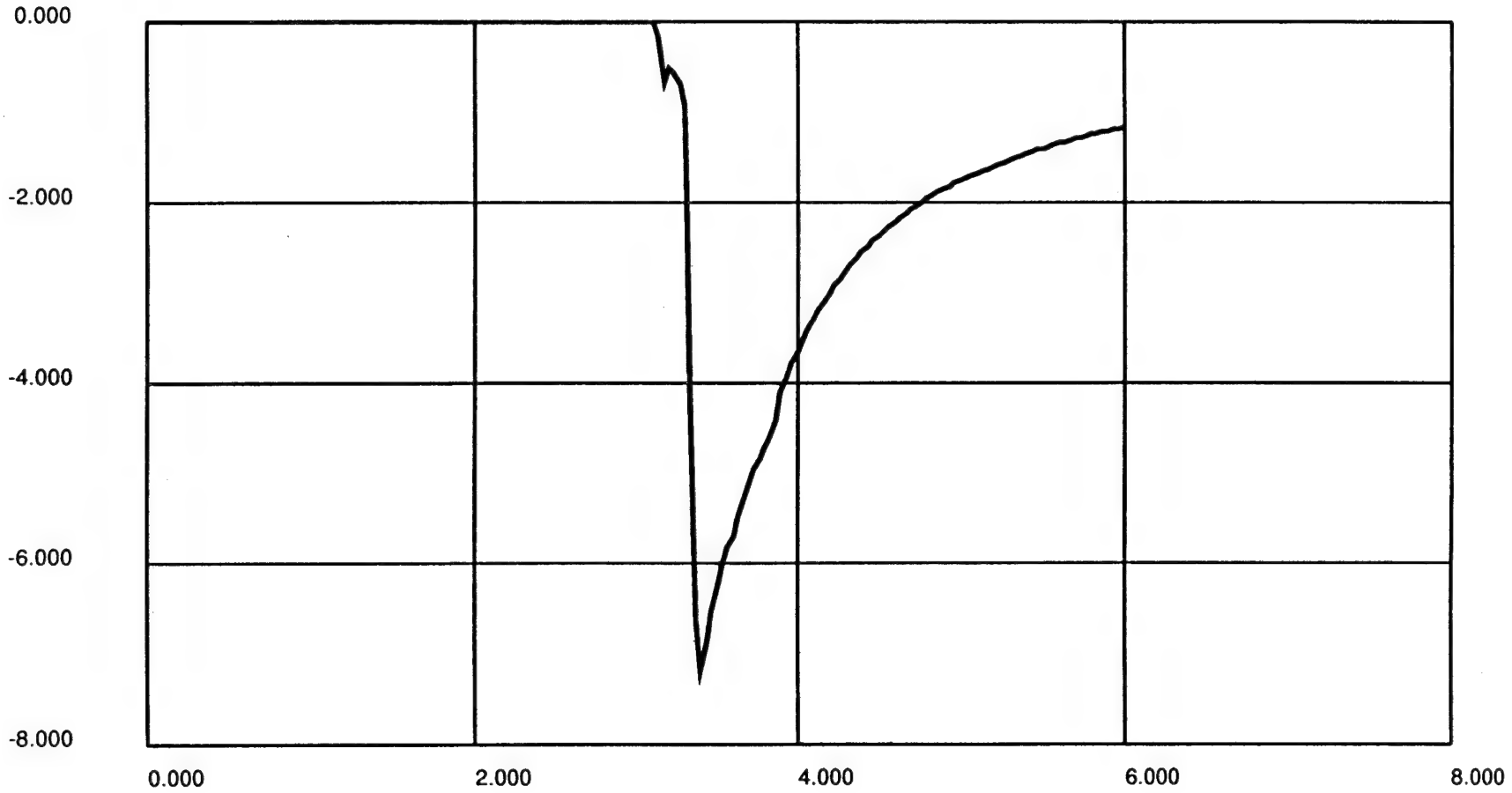
BAP 911101

Req 3001, Col 1, Target Boat Displacement



BAP 911101

Req 3002, Col 1, Target Boat Velocity



BAP 911101

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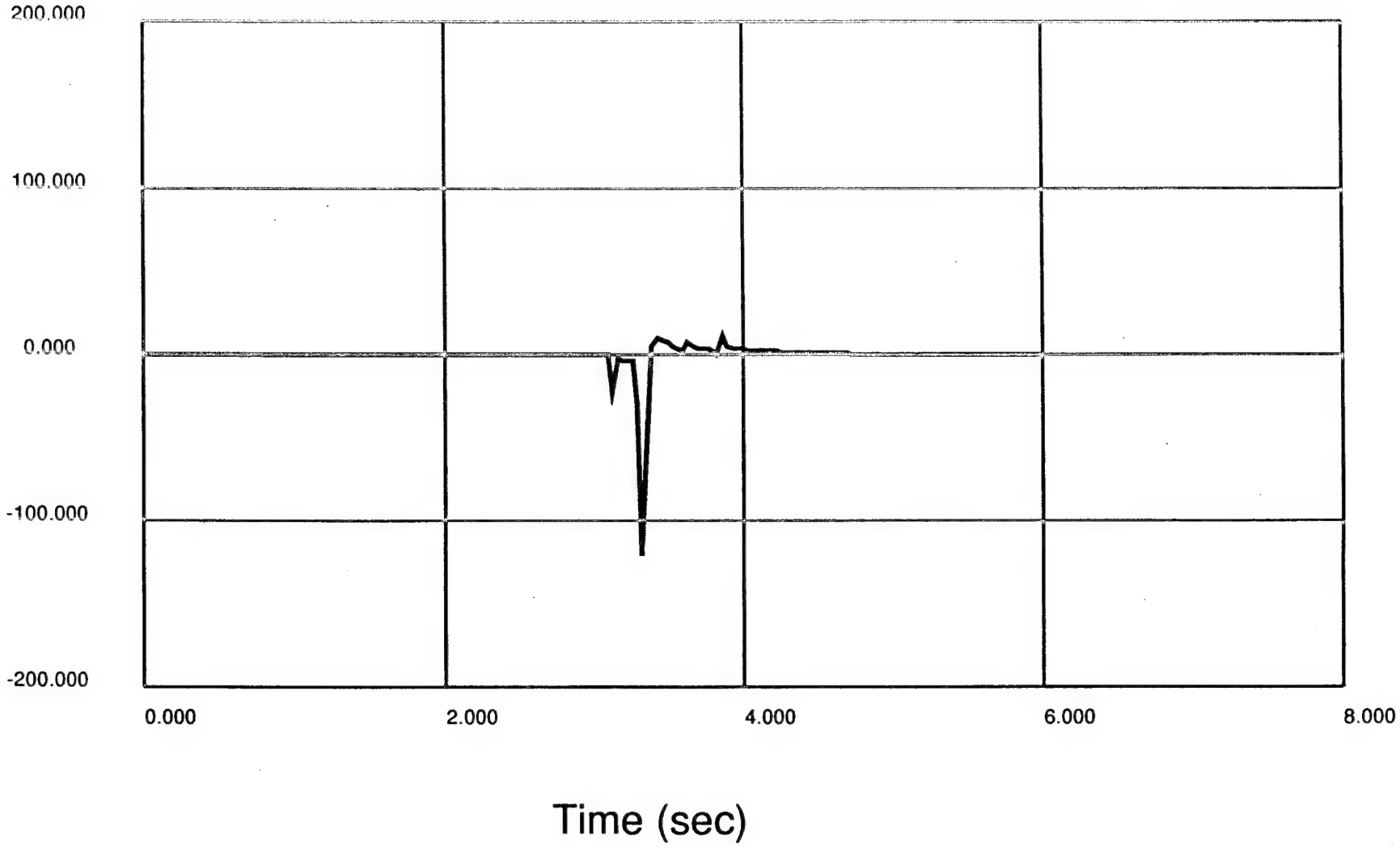

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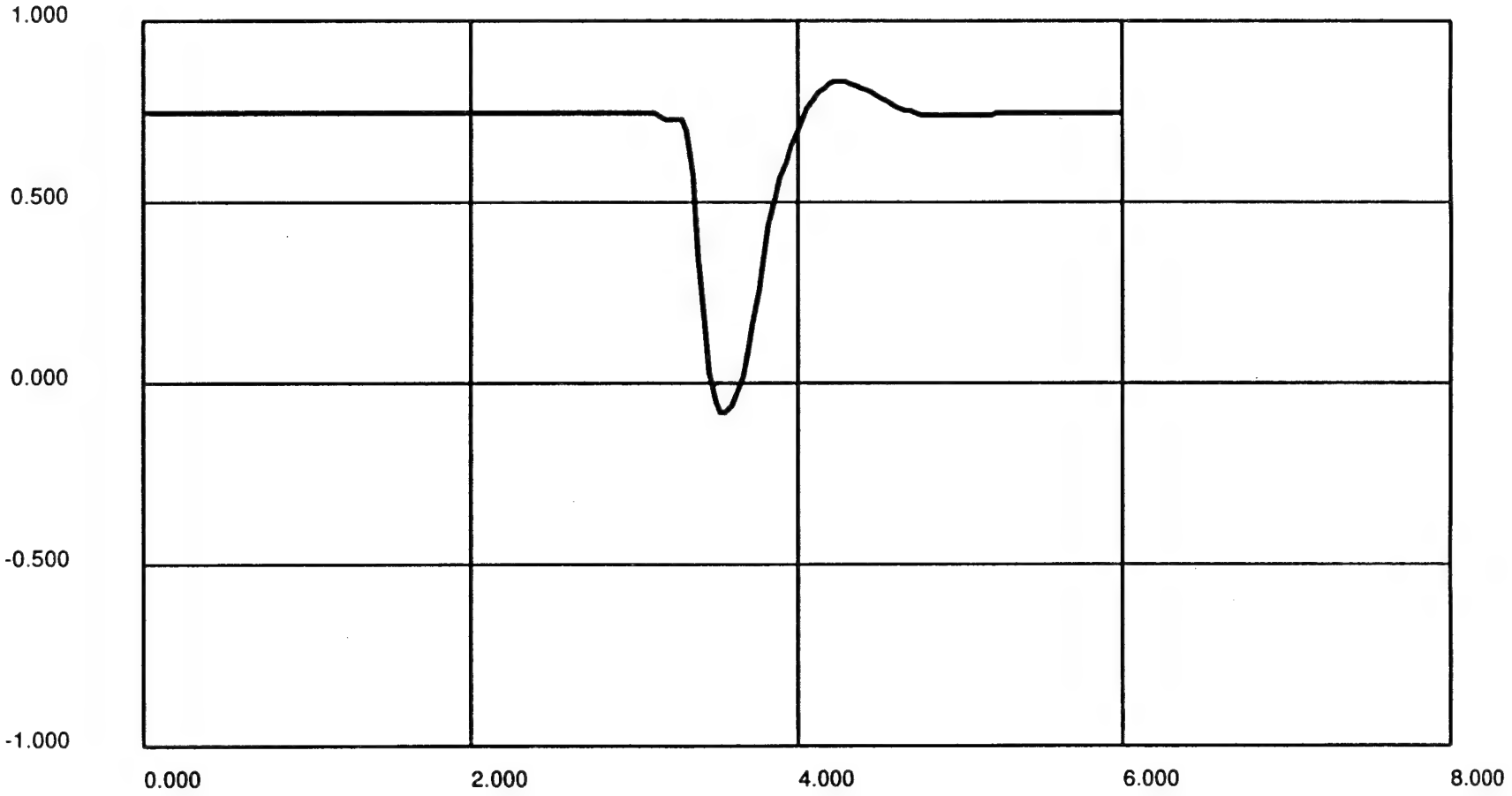

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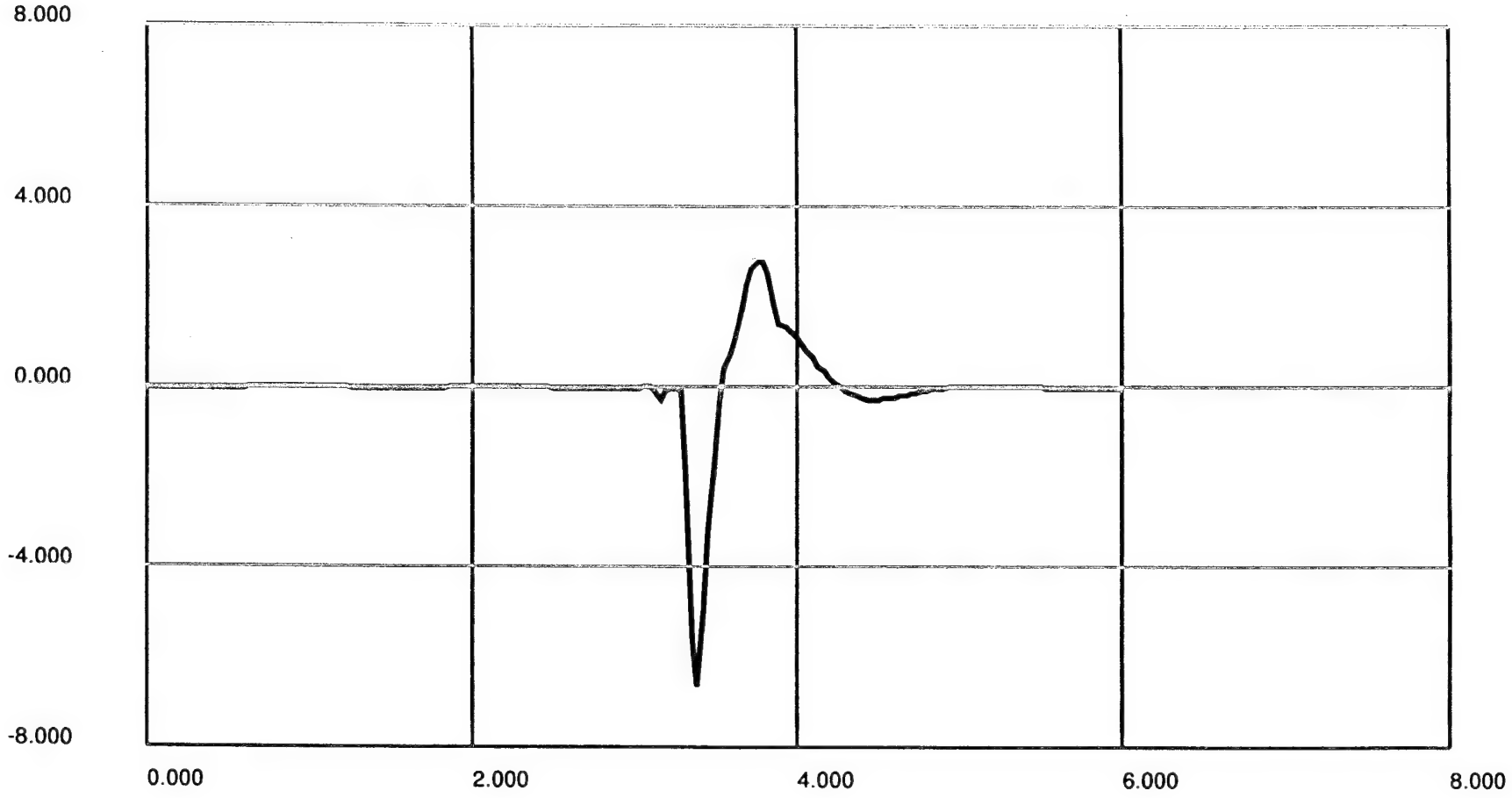
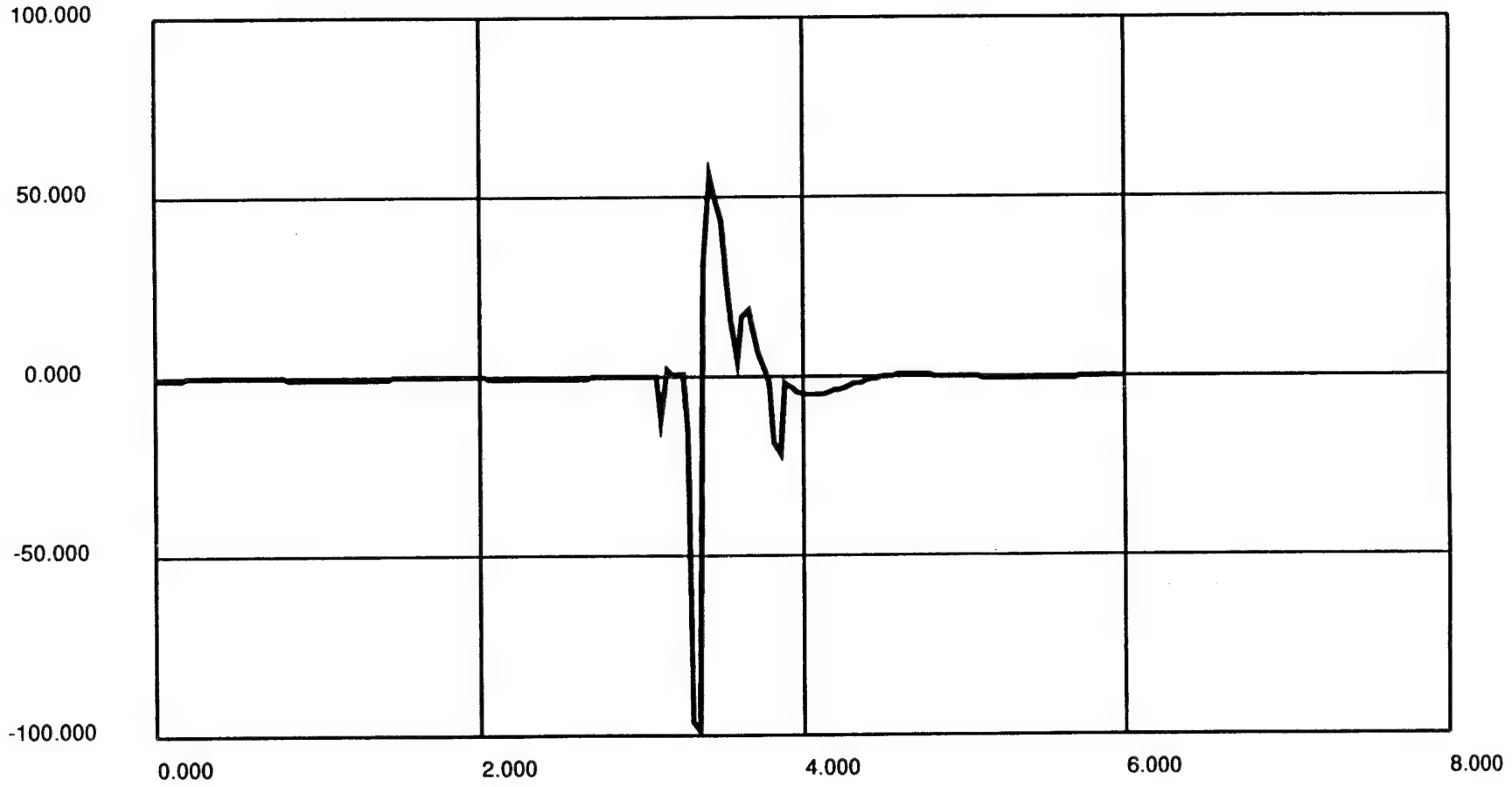


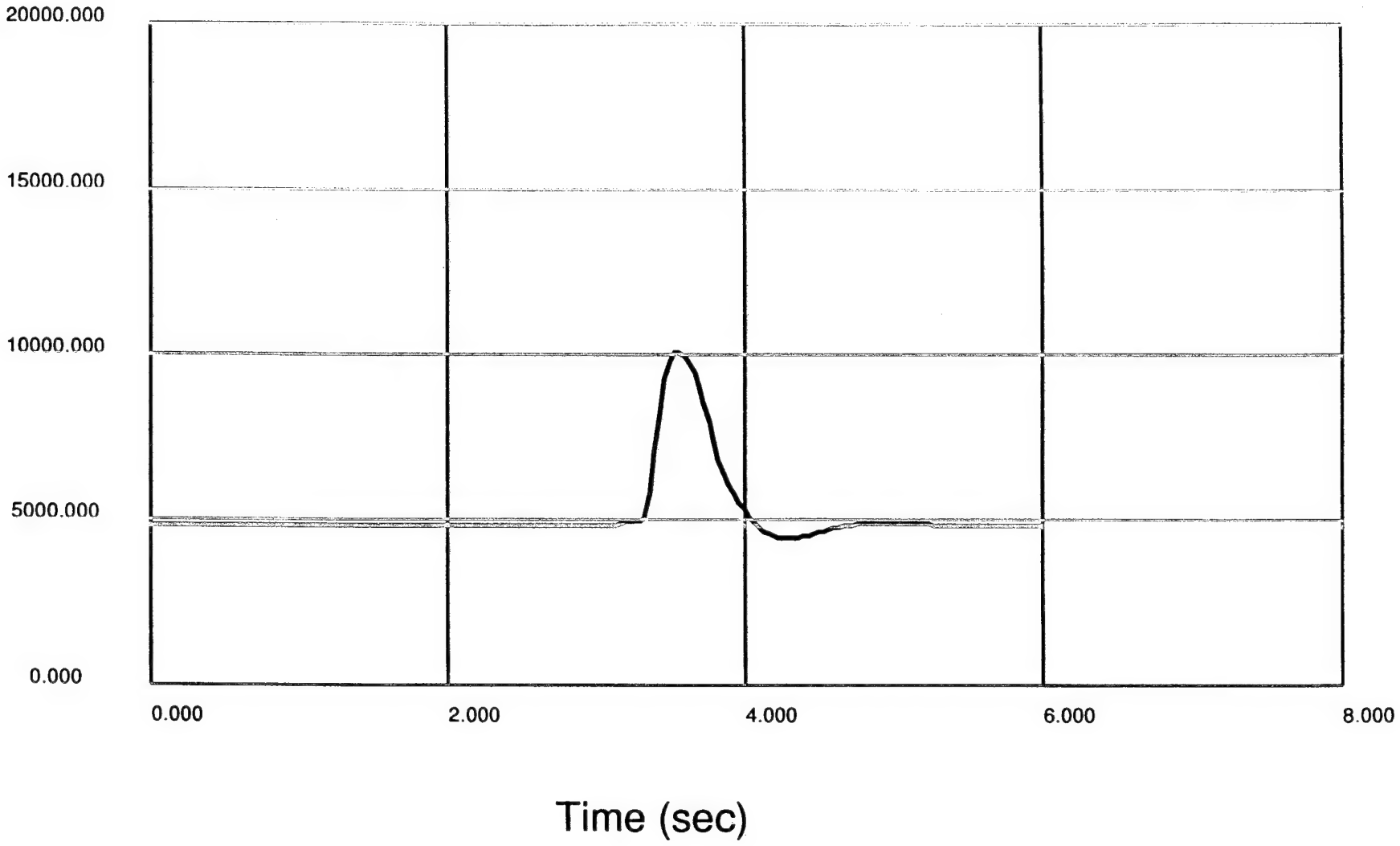
BAP 911101

Req 3003, Col 3, Target Boat Acceleration



BAP 911101

Req 3004, Col 3, Target Boat Forces



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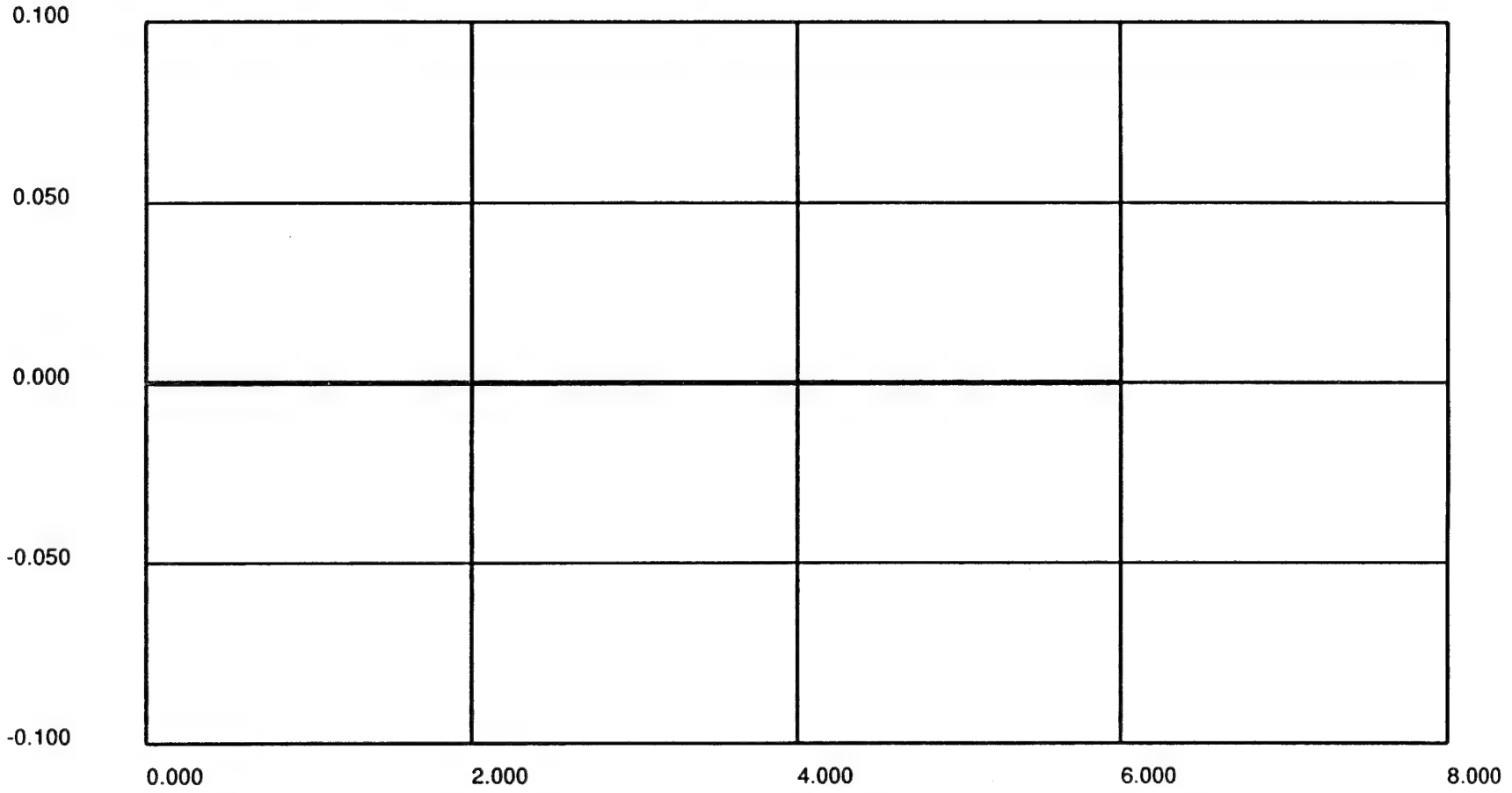
Req 3001, Col 5, Target Boat Displacement



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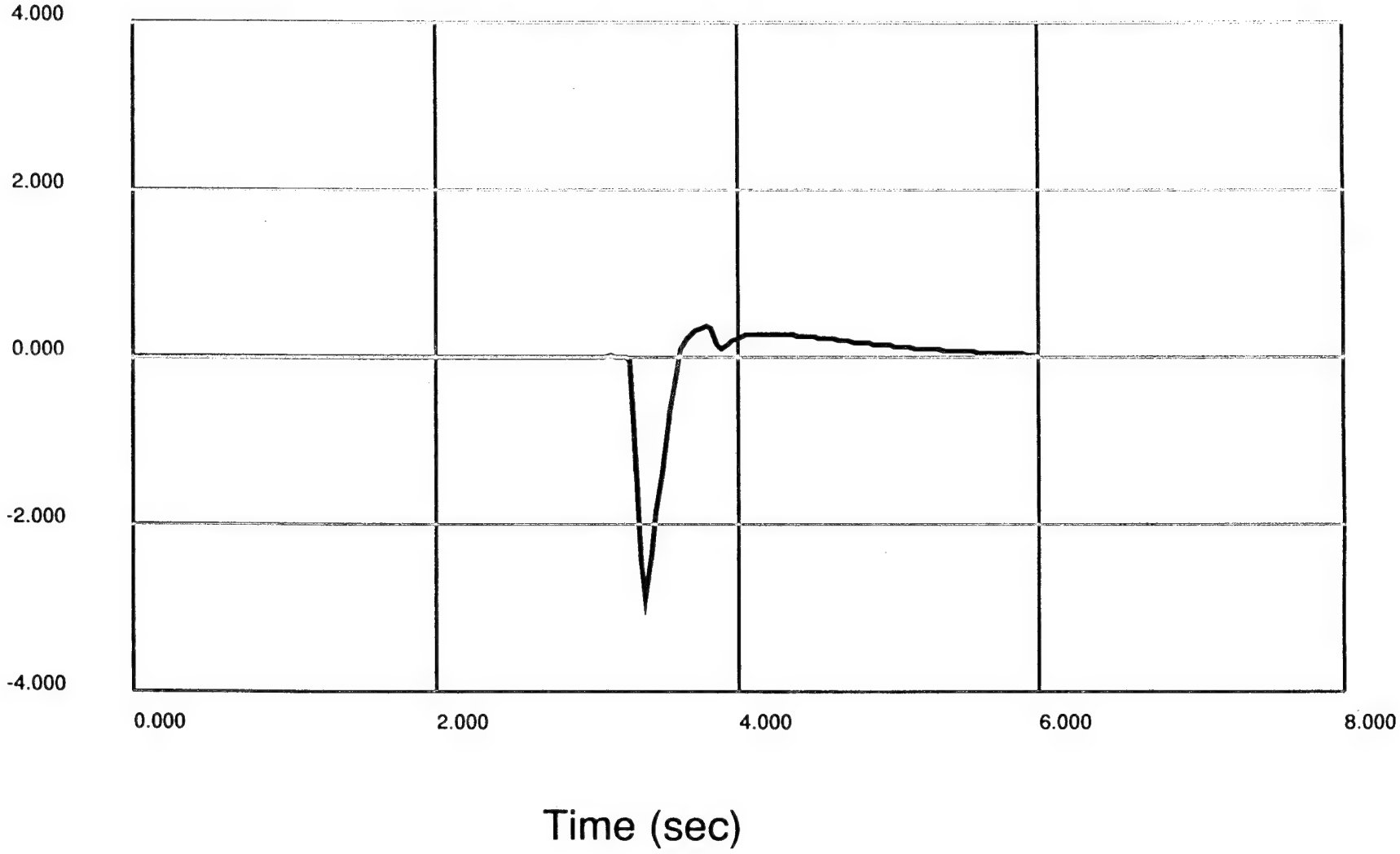

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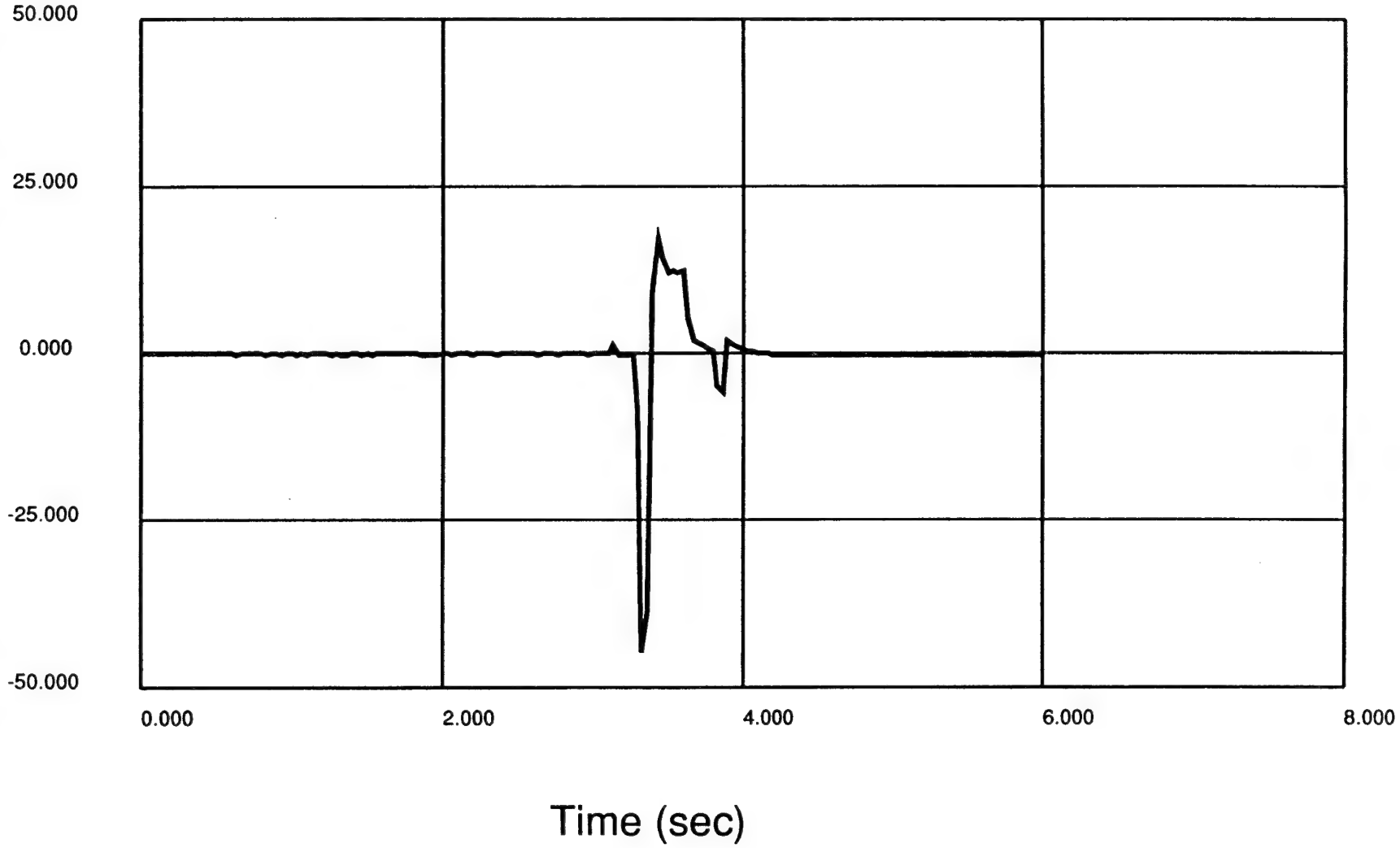
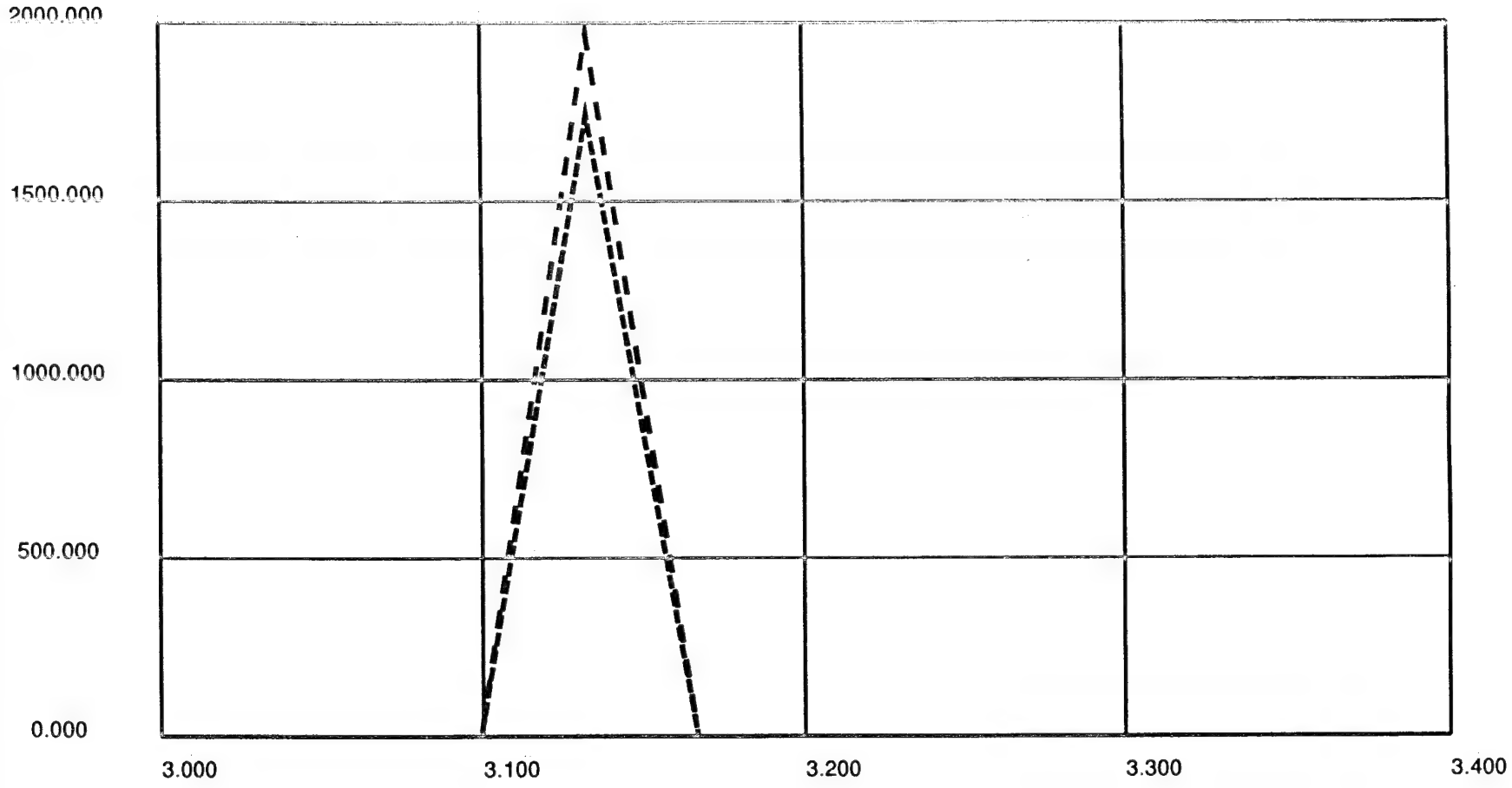
Req 3003, Col 5, Target Boat Acceleration



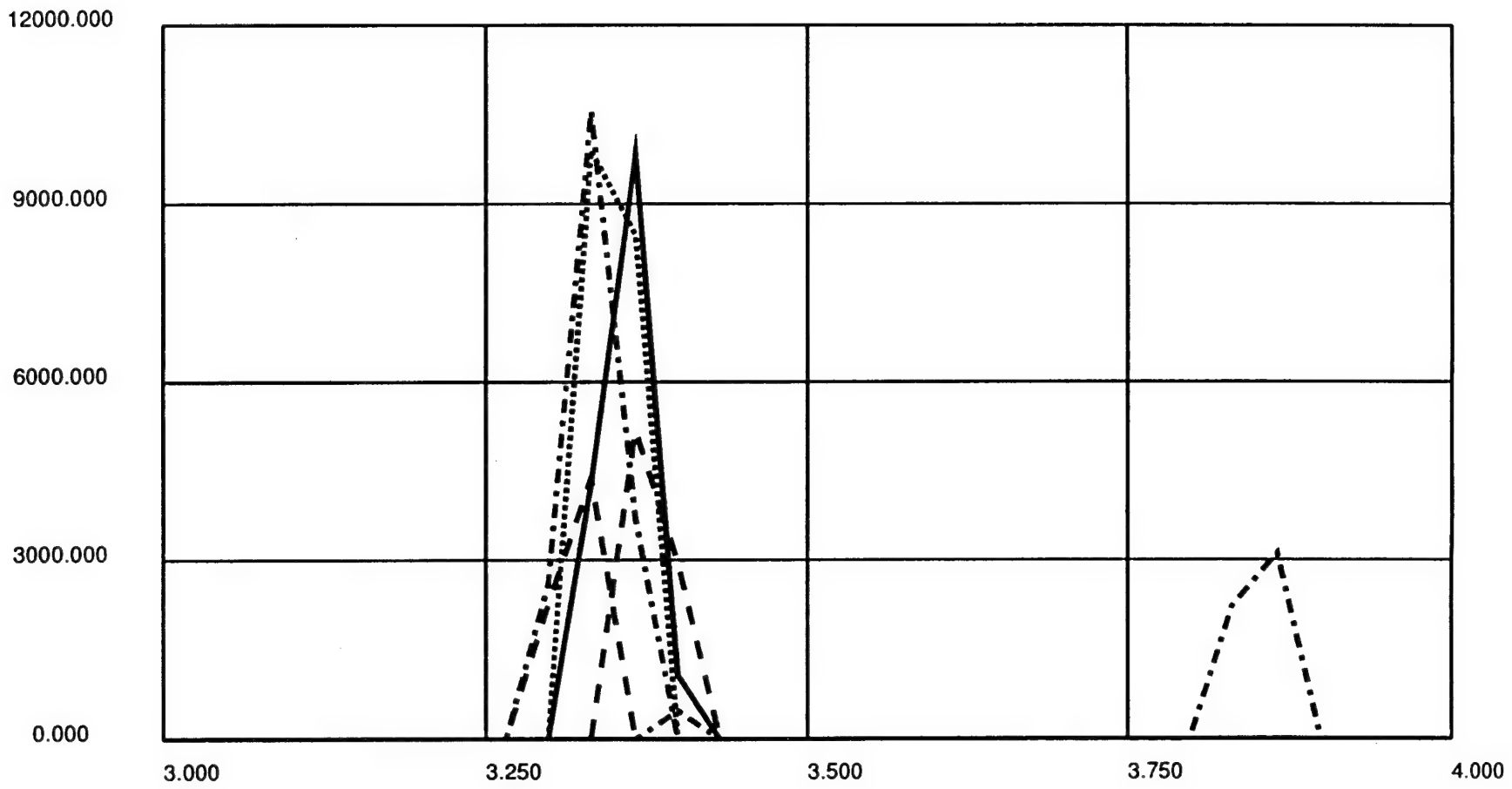
BAP 911101

Port Gunwale Impact Forces



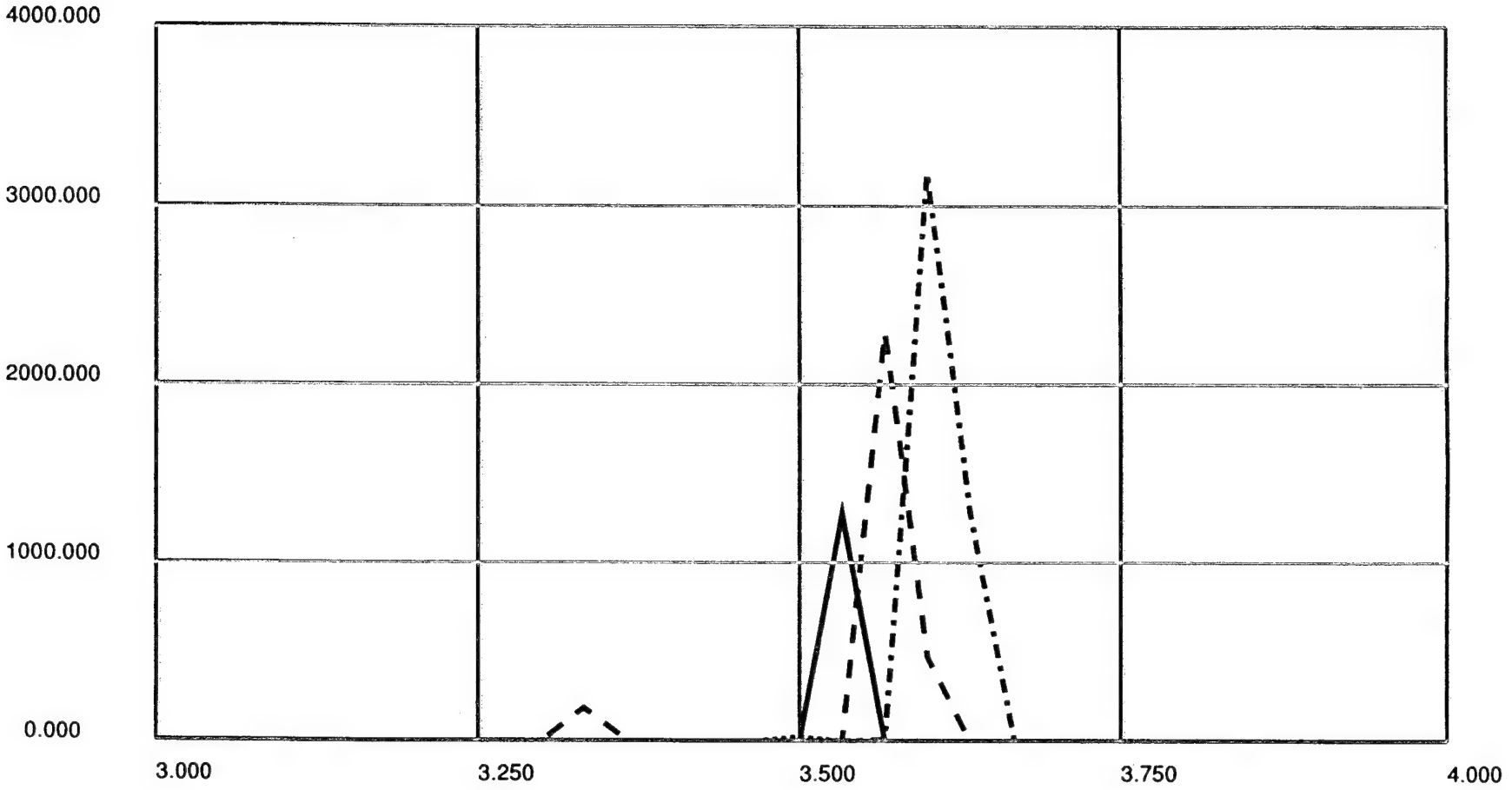
BAP 911101

Starboard Gunwale Impact Forces



BAP 911101

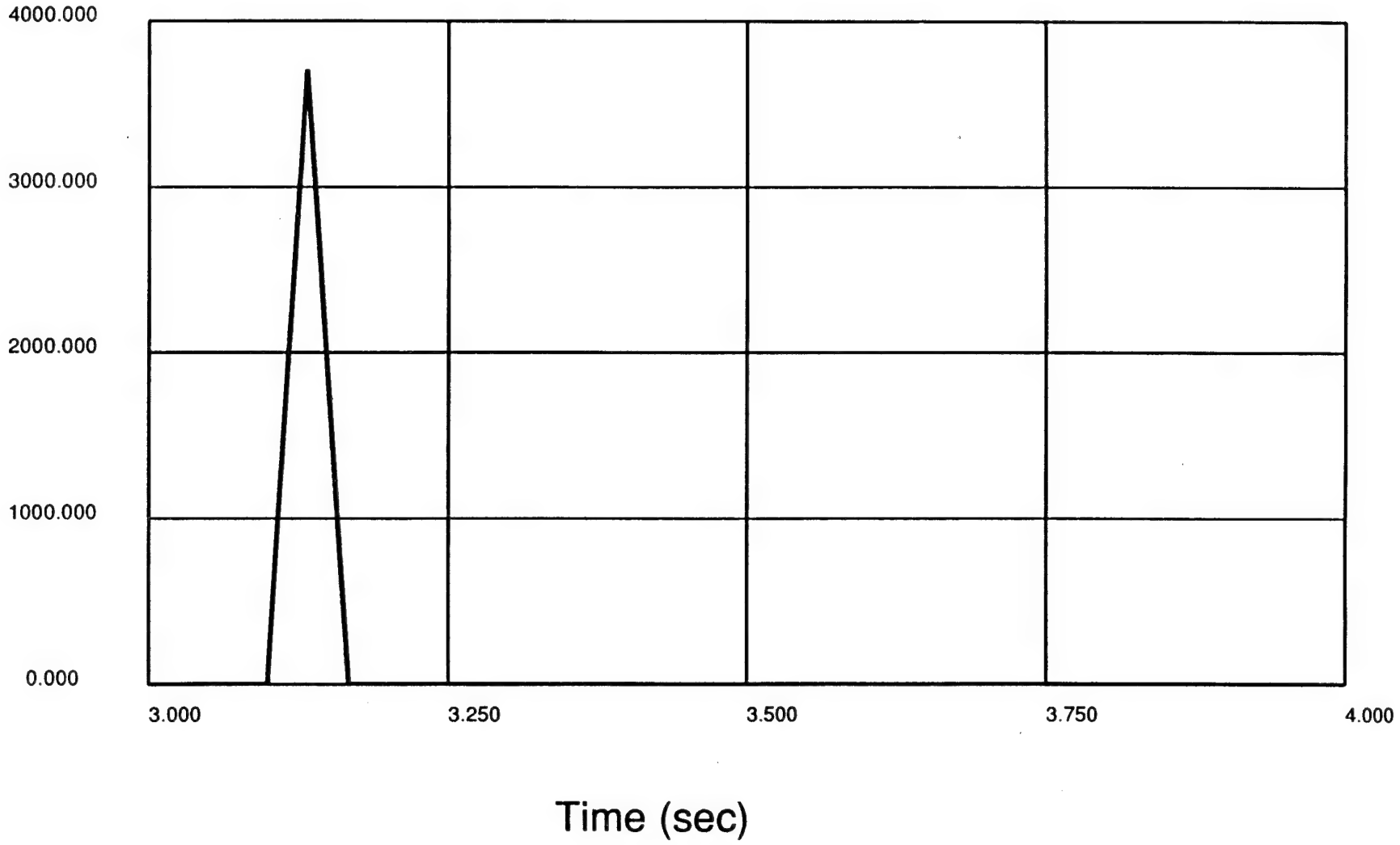
Port Chine Impact Forces



Time (sec)

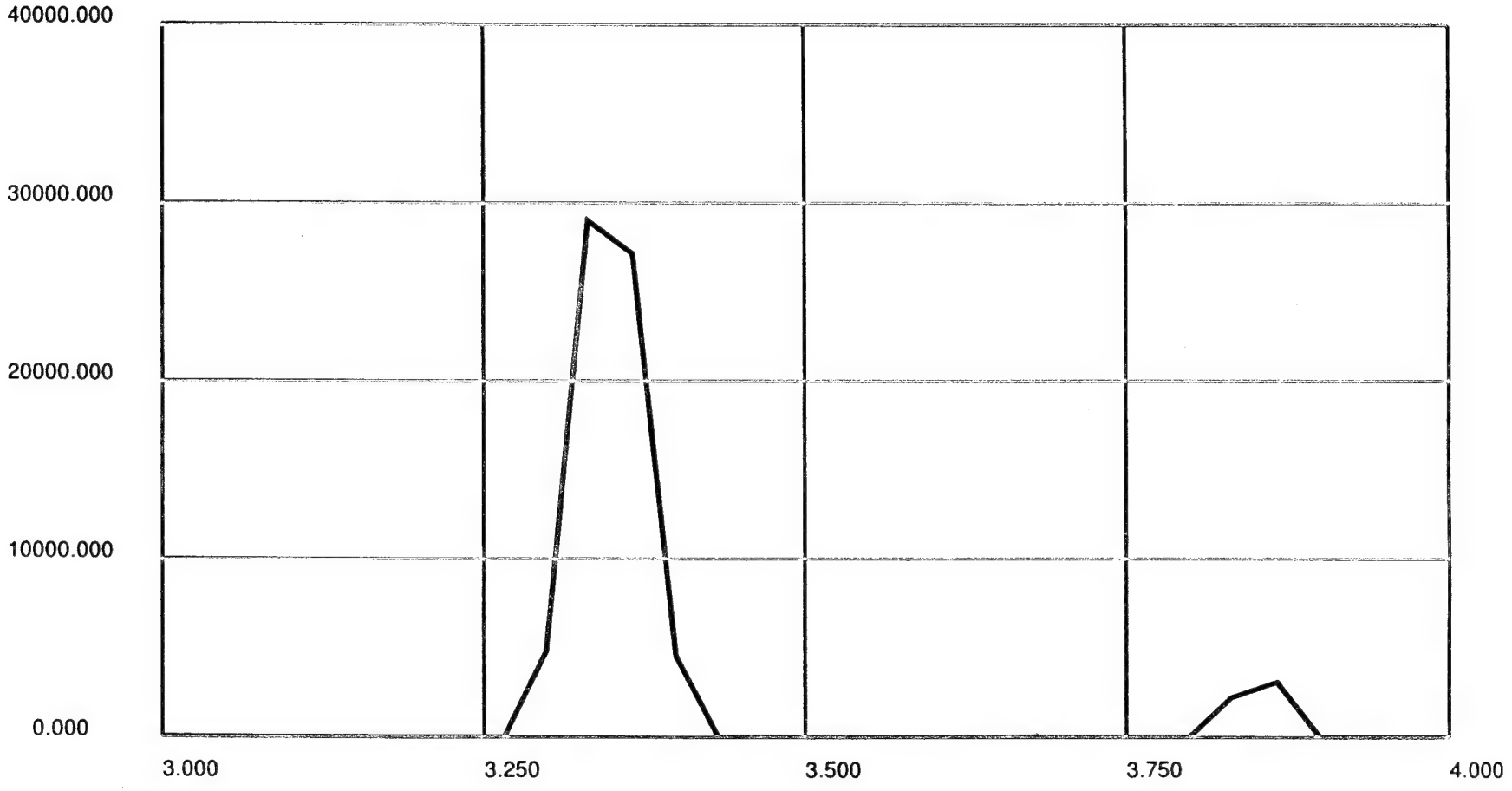
BAP 911101

Total Port Gunwale Impact Force



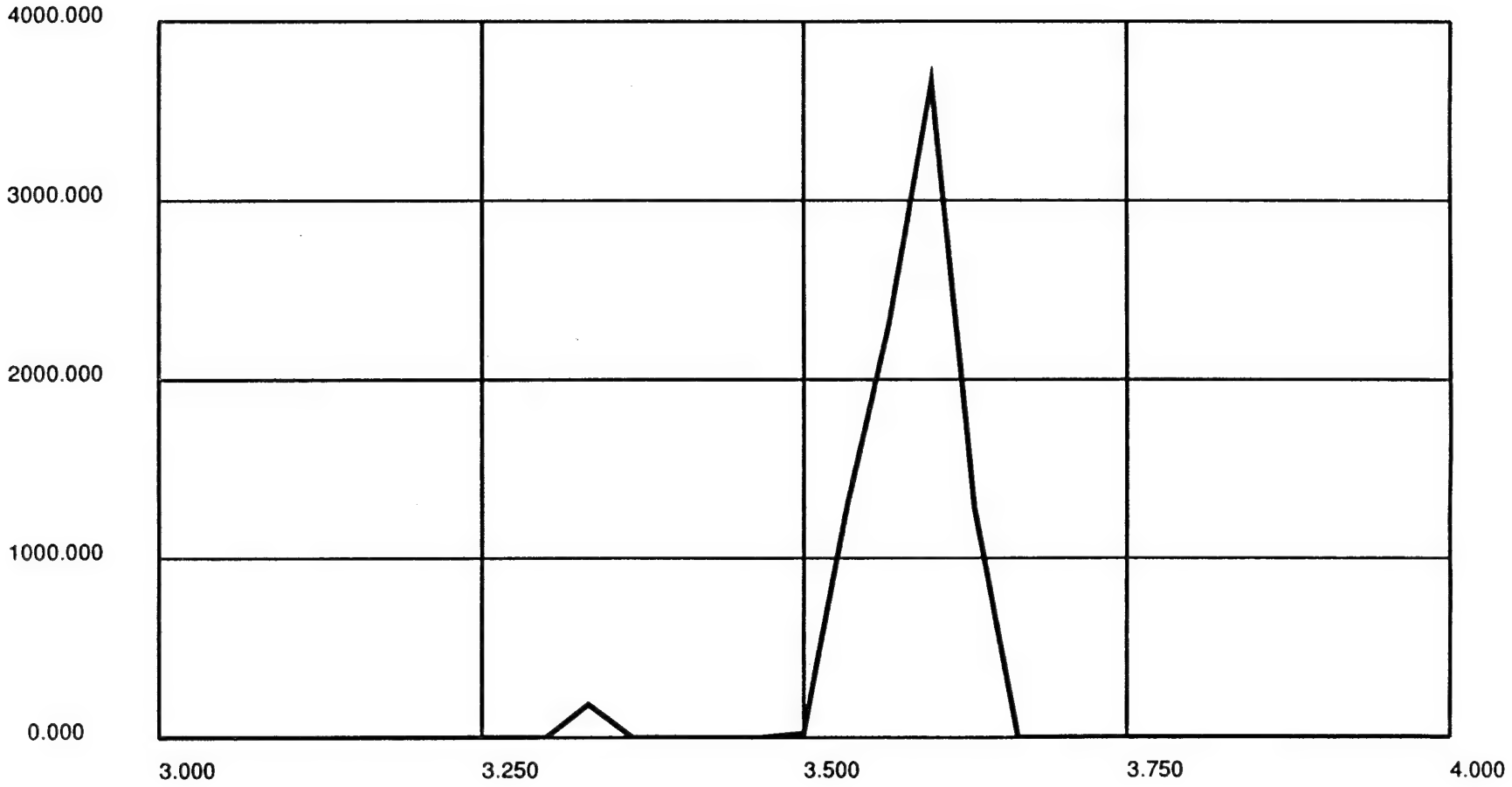
BAP 911101

Total Starboard Gunwale Impact Force



BAP 911101

Total Port Chine Impact Force



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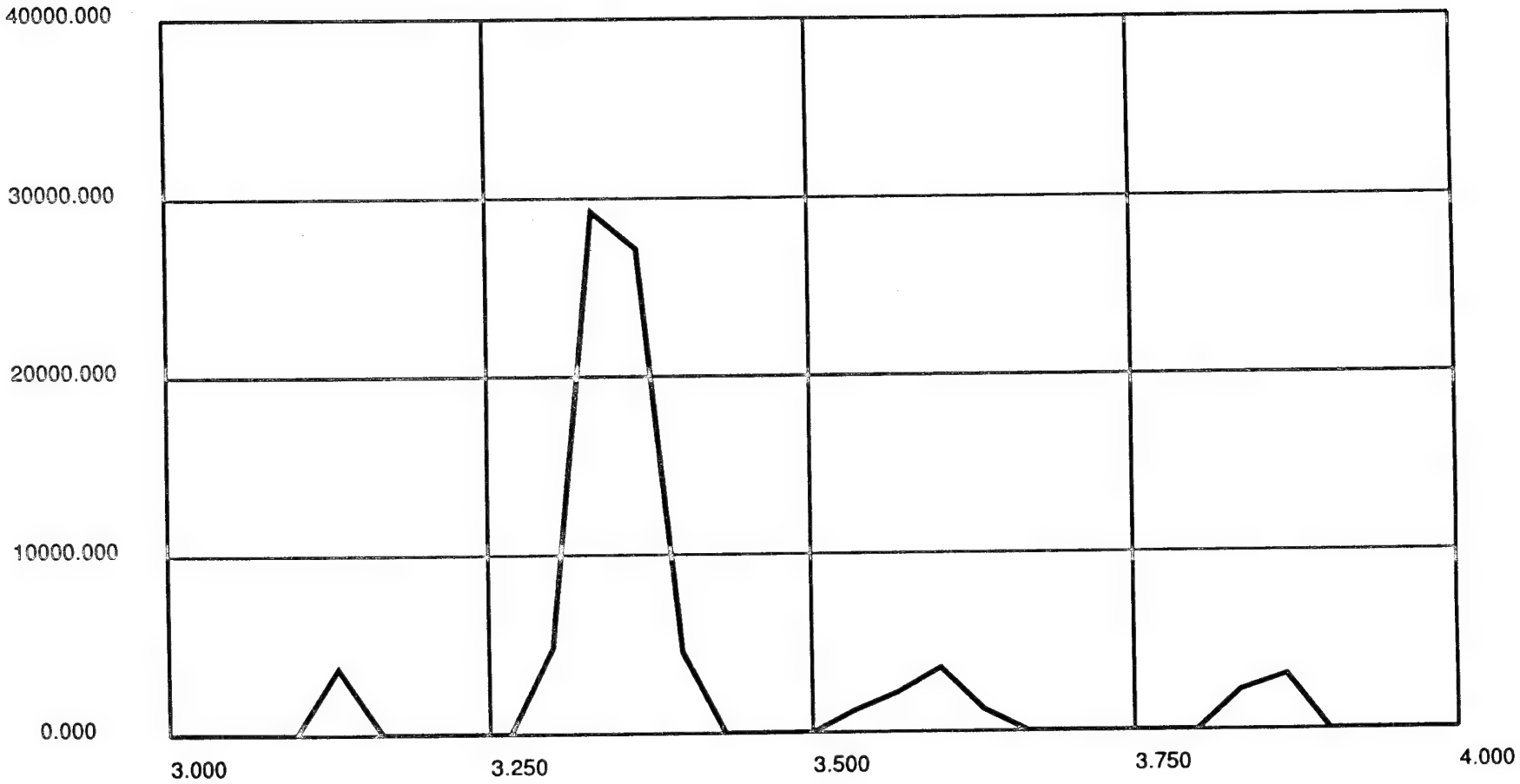
Total Impact Force



BAP 911101

APPENDIX E

Output from the 30 MPH Simulation - Tabulated Data

1

```
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*                                                           *
*                          A D A M S                        *
*                                                           *
*       Automatic Dynamic Analysis of Mechanical Systems    *
*                                                           *
*         12:15:22 31-OCT-91              Version 5.2.1a-hoops *
*                                                           *
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*************************************************************
```

Data Set Title:

Boat 30 mph

1

INITIAL CONDITIONS

Maximum displacement error = 0.0000000E+00

Convergence was achieved in 1 iteration(s)

Residual error less than 0.0000000E+00

Rectangular Coordinates
(Part Center of Mass)

Part	X	Y	Z
100	0.0000000000000E+00	0.0000000000000E+00	0.0000000000000E+00
200	1.3285000000000E+02	0.0000000000000E+00	7.5000000000000E-01
300	-2.0000000000000E+01	0.0000000000000E+00	7.5000000000000E-01

Angular Coordinates (Degrees)
(Part Center of Mass)

Part	Psi	Theta	Phi
100	0.0000000000000E+00	0.0000000000000E+00	0.0000000000000E+00
200	0.0000000000000E+00	0.0000000000000E+00	0.0000000000000E+00
300	9.0000000000000E+01	0.0000000000000E+00	0.0000000000000E+00

Velocity Solution

Rectangular Coordinates
(Part Center of Mass)

Part	Xdot	Ydot	Zdot
100	0.0000000000000E+00	0.0000000000000E+00	0.0000000000000E+00
200	-4.4000000000000E+01	0.0000000000000E+00	0.0000000000000E+00
300	0.0000000000000E+00	0.0000000000000E+00	0.0000000000000E+00

Angular Coordinates (Rad/Time)
(Part Center of Mass)

Part	Wx	Wy	Wz
100	0.0000000000000E+00	0.0000000000000E+00	0.0000000000000E+00
200	0.0000000000000E+00	1.0000000000000E-03	0.0000000000000E+00
300	0.0000000000000E+00	0.0000000000000E+00	0.0000000000000E+00

1Boat 30 mph
Request Number 2001

Bullet Boat Displacement

Displacement of Marker 200100 relative to Marker 1002001

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	1.32852E+02	1.32850E+02	0.00000E+00	7.50000E-01	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	1.31385E+02	1.31383E+02	0.00000E+00	7.53265E-01	0.00000E+00	-4.79338E-02	0.00000E+00

6.66667E-02	1.29919E+02	1.29917E+02	0.00000E+00	7.61977E-01	0.00000E+00	-1.55993E-01	0.00000E+00
1.00000E-01	1.28452E+02	1.28450E+02	0.00000E+00	7.74667E-01	0.00000E+00	-2.92789E-01	0.00000E+00
1.33333E-01	1.26986E+02	1.26983E+02	0.00000E+00	7.89925E-01	0.00000E+00	-4.40091E-01	0.00000E+00
1.66667E-01	1.25519E+02	1.25517E+02	0.00000E+00	8.06541E-01	0.00000E+00	-5.88407E-01	0.00000E+00
2.00000E-01	1.24053E+02	1.24050E+02	0.00000E+00	8.23539E-01	0.00000E+00	-7.33209E-01	0.00000E+00
2.33333E-01	1.22586E+02	1.22583E+02	0.00000E+00	8.39905E-01	0.00000E+00	-8.71037E-01	0.00000E+00
2.66667E-01	1.21120E+02	1.21117E+02	0.00000E+00	8.54958E-01	0.00000E+00	-1.00100E+00	0.00000E+00
3.00000E-01	1.19653E+02	1.19650E+02	0.00000E+00	8.68254E-01	0.00000E+00	-1.12335E+00	0.00000E+00
3.33333E-01	1.18187E+02	1.18183E+02	0.00000E+00	8.79484E-01	0.00000E+00	-1.23864E+00	0.00000E+00
3.66667E-01	1.16720E+02	1.16717E+02	0.00000E+00	8.88564E-01	0.00000E+00	-1.34755E+00	0.00000E+00
4.00000E-01	1.15253E+02	1.15250E+02	0.00000E+00	8.95479E-01	0.00000E+00	-1.45068E+00	0.00000E+00
4.33333E-01	1.13787E+02	1.13783E+02	0.00000E+00	9.00299E-01	0.00000E+00	-1.54857E+00	0.00000E+00
4.66667E-01	1.12320E+02	1.12317E+02	0.00000E+00	9.03159E-01	0.00000E+00	-1.64181E+00	0.00000E+00
5.00000E-01	1.10854E+02	1.10850E+02	0.00000E+00	9.04234E-01	0.00000E+00	-1.73090E+00	0.00000E+00
5.33333E-01	1.09387E+02	1.09383E+02	0.00000E+00	9.03724E-01	0.00000E+00	-1.81631E+00	0.00000E+00
5.66667E-01	1.07920E+02	1.07917E+02	0.00000E+00	9.01883E-01	0.00000E+00	-1.89852E+00	0.00000E+00
6.00000E-01	1.06454E+02	1.06450E+02	0.00000E+00	8.98951E-01	0.00000E+00	-1.97793E+00	0.00000E+00
6.33333E-01	1.04987E+02	1.04983E+02	0.00000E+00	8.95162E-01	0.00000E+00	-2.05485E+00	0.00000E+00
6.66667E-01	1.03520E+02	1.03517E+02	0.00000E+00	8.90735E-01	0.00000E+00	-2.12954E+00	0.00000E+00
7.00000E-01	1.02054E+02	1.02050E+02	0.00000E+00	8.85877E-01	0.00000E+00	-2.20222E+00	0.00000E+00
7.33333E-01	1.00587E+02	1.00583E+02	0.00000E+00	8.80764E-01	0.00000E+00	-2.27306E+00	0.00000E+00
7.66667E-01	9.91205E+01	9.91167E+01	0.00000E+00	8.75549E-01	0.00000E+00	-2.34219E+00	0.00000E+00
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8.33333E-01	9.61872E+01	9.61833E+01	0.00000E+00	8.65309E-01	0.00000E+00	-2.47573E+00	0.00000E+00
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9.00000E-01	9.32539E+01	9.32500E+01	0.00000E+00	8.55903E-01	0.00000E+00	-2.60337E+00	0.00000E+00
9.33333E-01	9.17873E+01	9.17833E+01	0.00000E+00	8.51651E-01	0.00000E+00	-2.66508E+00	0.00000E+00
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1.03333E+00	8.73874E+01	8.73833E+01	0.00000E+00	8.40770E-01	0.00000E+00	-2.84191E+00	0.00000E+00
1.06667E+00	8.59207E+01	8.59167E+01	0.00000E+00	8.37296E-01	0.00000E+00	-2.89813E+00	0.00000E+00
1.10000E+00	8.44541E+01	8.44500E+01	0.00000E+00	8.33551E-01	0.00000E+00	-2.95304E+00	0.00000E+00
1.13333E+00	8.29875E+01	8.29833E+01	0.00000E+00	8.29548E-01	0.00000E+00	-3.00668E+00	0.00000E+00
1.16667E+00	8.15208E+01	8.15167E+01	0.00000E+00	8.25400E-01	0.00000E+00	-3.05913E+00	0.00000E+00
1.20000E+00	8.00542E+01	8.00500E+01	0.00000E+00	8.21242E-01	0.00000E+00	-3.11044E+00	0.00000E+00
1.23333E+00	7.85876E+01	7.85833E+01	0.00000E+00	8.17196E-01	0.00000E+00	-3.16067E+00	0.00000E+00
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1.33333E+00	7.41877E+01	7.41833E+01	0.00000E+00	8.06747E-01	0.00000E+00	-3.30512E+00	0.00000E+00
1.36667E+00	7.27211E+01	7.27167E+01	0.00000E+00	8.04097E-01	0.00000E+00	-3.35123E+00	0.00000E+00
1.40000E+00	7.12545E+01	7.12500E+01	0.00000E+00	8.01963E-01	0.00000E+00	-3.39630E+00	0.00000E+00
1.43333E+00	6.97879E+01	6.97833E+01	0.00000E+00	8.00377E-01	0.00000E+00	-3.44030E+00	0.00000E+00
1.46667E+00	6.83213E+01	6.83167E+01	0.00000E+00	7.99349E-01	0.00000E+00	-3.48321E+00	0.00000E+00
1.50000E+00	6.68548E+01	6.68500E+01	0.00000E+00	7.98874E-01	0.00000E+00	-3.52501E+00	0.00000E+00
1.53333E+00	6.53882E+01	6.53833E+01	0.00000E+00	7.98926E-01	0.00000E+00	-3.56566E+00	0.00000E+00
1.56667E+00	6.39217E+01	6.39167E+01	0.00000E+00	7.99458E-01	0.00000E+00	-3.60513E+00	0.00000E+00
1.60000E+00	6.24551E+01	6.24500E+01	0.00000E+00	8.00410E-01	0.00000E+00	-3.64341E+00	0.00000E+00
1.63333E+00	6.09886E+01	6.09833E+01	0.00000E+00	8.01706E-01	0.00000E+00	-3.68048E+00	0.00000E+00
1.66667E+00	5.95221E+01	5.95167E+01	0.00000E+00	8.03260E-01	0.00000E+00	-3.71634E+00	0.00000E+00
1.70000E+00	5.80556E+01	5.80500E+01	0.00000E+00	8.04975E-01	0.00000E+00	-3.75099E+00	0.00000E+00
1.73333E+00	5.65891E+01	5.65833E+01	0.00000E+00	8.06754E-01	0.00000E+00	-3.78445E+00	0.00000E+00
1.76667E+00	5.51226E+01	5.51167E+01	0.00000E+00	8.08496E-01	0.00000E+00	-3.81673E+00	0.00000E+00
1.80000E+00	5.36561E+01	5.36500E+01	0.00000E+00	8.10106E-01	0.00000E+00	-3.84789E+00	0.00000E+00
1.83333E+00	5.21896E+01	5.21833E+01	0.00000E+00	8.11492E-01	0.00000E+00	-3.87795E+00	0.00000E+00

1.86667E+00	5.07232E+01	5.07167E+01	0.00000E+00	8.12576E-01	0.00000E+00	-3.90698E+00	0.00000E+00
1.90000E+00	4.92567E+01	4.92500E+01	0.00000E+00	8.13290E-01	0.00000E+00	-3.93504E+00	0.00000E+00
1.93333E+00	4.77903E+01	4.77833E+01	0.00000E+00	8.13582E-01	0.00000E+00	-3.96218E+00	0.00000E+00
1.96667E+00	4.63238E+01	4.63167E+01	0.00000E+00	8.13416E-01	0.00000E+00	-3.98848E+00	0.00000E+00
2.00000E+00	4.48574E+01	4.48500E+01	0.00000E+00	8.12774E-01	0.00000E+00	-4.01400E+00	0.00000E+00
2.03333E+00	4.33909E+01	4.33833E+01	0.00000E+00	8.11654E-01	0.00000E+00	-4.03877E+00	0.00000E+00
2.06667E+00	4.19245E+01	4.19167E+01	0.00000E+00	8.10072E-01	0.00000E+00	-4.06287E+00	0.00000E+00
2.10000E+00	4.04581E+01	4.04500E+01	0.00000E+00	8.08063E-01	0.00000E+00	-4.08636E+00	0.00000E+00
2.13333E+00	3.89917E+01	3.89833E+01	0.00000E+00	8.05679E-01	0.00000E+00	-4.10932E+00	0.00000E+00
2.16667E+00	3.75253E+01	3.75167E+01	0.00000E+00	8.02988E-01	0.00000E+00	-4.13181E+00	0.00000E+00
2.20000E+00	3.60589E+01	3.60500E+01	0.00000E+00	8.00066E-01	0.00000E+00	-4.15389E+00	0.00000E+00
2.23333E+00	3.45925E+01	3.45833E+01	0.00000E+00	7.97002E-01	0.00000E+00	-4.17561E+00	0.00000E+00
2.26667E+00	3.31262E+01	3.31167E+01	0.00000E+00	7.93890E-01	0.00000E+00	-4.19701E+00	0.00000E+00
2.30000E+00	3.16599E+01	3.16500E+01	0.00000E+00	7.90824E-01	0.00000E+00	-4.21812E+00	0.00000E+00
2.33333E+00	3.01936E+01	3.01833E+01	0.00000E+00	7.87898E-01	0.00000E+00	-4.23895E+00	0.00000E+00
2.36667E+00	2.87274E+01	2.87167E+01	0.00000E+00	7.85199E-01	0.00000E+00	-4.25950E+00	0.00000E+00
2.40000E+00	2.72612E+01	2.72500E+01	0.00000E+00	7.82810E-01	0.00000E+00	-4.27977E+00	0.00000E+00
2.43333E+00	2.57952E+01	2.57833E+01	0.00000E+00	7.80799E-01	0.00000E+00	-4.29973E+00	0.00000E+00
2.46667E+00	2.43291E+01	2.43167E+01	0.00000E+00	7.79218E-01	0.00000E+00	-4.31936E+00	0.00000E+00
2.50000E+00	2.28632E+01	2.28500E+01	0.00000E+00	7.78108E-01	0.00000E+00	-4.33863E+00	0.00000E+00
2.53333E+00	2.13975E+01	2.13833E+01	0.00000E+00	7.77487E-01	0.00000E+00	-4.35749E+00	0.00000E+00
2.56667E+00	1.99318E+01	1.99167E+01	0.00000E+00	7.77358E-01	0.00000E+00	-4.37590E+00	0.00000E+00
2.60000E+00	1.84664E+01	1.84500E+01	0.00000E+00	7.77698E-01	0.00000E+00	-4.39381E+00	0.00000E+00
2.63333E+00	1.70012E+01	1.69833E+01	0.00000E+00	7.78485E-01	0.00000E+00	-4.41119E+00	0.00000E+00
2.66667E+00	1.55362E+01	1.55167E+01	0.00000E+00	7.79667E-01	0.00000E+00	-4.42800E+00	0.00000E+00
2.70000E+00	1.40717E+01	1.40500E+01	0.00000E+00	7.81181E-01	0.00000E+00	-4.44420E+00	0.00000E+00
2.73333E+00	1.26077E+01	1.25833E+01	0.00000E+00	7.82950E-01	0.00000E+00	-4.45977E+00	0.00000E+00
2.76667E+00	1.11443E+01	1.11167E+01	0.00000E+00	7.84891E-01	0.00000E+00	-4.47469E+00	0.00000E+00
2.80000E+00	9.68203E+00	9.65000E+00	0.00000E+00	7.86916E-01	0.00000E+00	-4.48895E+00	0.00000E+00
2.83333E+00	8.22127E+00	8.18333E+00	0.00000E+00	7.88934E-01	0.00000E+00	-4.50257E+00	0.00000E+00
2.86667E+00	6.76307E+00	6.71667E+00	0.00000E+00	7.90855E-01	0.00000E+00	-4.51554E+00	0.00000E+00
2.90000E+00	5.30949E+00	5.25000E+00	0.00000E+00	7.92594E-01	0.00000E+00	-4.52789E+00	0.00000E+00
2.93333E+00	3.86577E+00	3.78333E+00	0.00000E+00	7.94070E-01	0.00000E+00	-4.53966E+00	0.00000E+00
2.96667E+00	2.44935E+00	2.31667E+00	0.00000E+00	7.95218E-01	0.00000E+00	-4.55088E+00	0.00000E+00
3.00000E+00	1.16451E+00	8.50000E-01	0.00000E+00	7.95984E-01	0.00000E+00	-4.56161E+00	0.00000E+00
3.03333E+00	1.00718E+00	-6.16667E-01	0.00000E+00	7.96329E-01	0.00000E+00	-4.57188E+00	0.00000E+00
3.06667E+00	2.23031E+00	-2.08333E+00	0.00000E+00	7.96231E-01	0.00000E+00	-4.58178E+00	0.00000E+00
3.10000E+00	3.63808E+00	-3.55000E+00	0.00000E+00	7.95684E-01	0.00000E+00	-4.59134E+00	0.00000E+00
3.13333E+00	5.07855E+00	-5.01592E+00	0.00000E+00	7.95065E-01	0.00000E+00	-4.60852E+00	0.00000E+00
3.16667E+00	6.51472E+00	-6.46506E+00	0.00000E+00	8.02850E-01	0.00000E+00	-4.77788E+00	0.00000E+00
3.20000E+00	7.95270E+00	-7.91135E+00	0.00000E+00	8.09959E-01	0.00000E+00	-4.86097E+00	0.00000E+00
3.23333E+00	9.39510E+00	-9.35989E+00	0.00000E+00	8.12600E-01	0.00000E+00	-4.84616E+00	0.00000E+00
3.26667E+00	1.08362E+01	-1.08056E+01	0.00000E+00	8.13454E-01	0.00000E+00	-4.83327E+00	0.00000E+00
3.30000E+00	1.22737E+01	-1.22467E+01	0.00000E+00	8.13598E-01	0.00000E+00	-4.84055E+00	0.00000E+00
3.33333E+00	1.36653E+01	-1.36393E+01	0.00000E+00	8.42623E-01	0.00000E+00	-5.37012E+00	0.00000E+00
3.36667E+00	1.49525E+01	-1.49200E+01	0.00000E+00	9.85206E-01	0.00000E+00	-7.27837E+00	0.00000E+00
3.40000E+00	1.61818E+01	-1.61333E+01	0.00000E+00	1.25109E+00	0.00000E+00	-9.78089E+00	0.00000E+00
3.43333E+00	1.73978E+01	-1.73292E+01	0.00000E+00	1.54317E+00	0.00000E+00	-1.14361E+01	0.00000E+00
3.46667E+00	1.86094E+01	-1.85208E+01	0.00000E+00	1.81441E+00	0.00000E+00	-1.22519E+01	0.00000E+00
3.50000E+00	1.98158E+01	-1.97087E+01	0.00000E+00	2.05802E+00	0.00000E+00	-1.26246E+01	0.00000E+00
3.53333E+00	2.10160E+01	-2.08928E+01	0.00000E+00	2.27222E+00	0.00000E+00	-1.27760E+01	0.00000E+00
3.56667E+00	2.22087E+01	-2.20718E+01	0.00000E+00	2.46151E+00	0.00000E+00	-1.27851E+01	0.00000E+00
3.60000E+00	2.33933E+01	-2.32447E+01	0.00000E+00	2.63258E+00	0.00000E+00	-1.26854E+01	0.00000E+00
3.63333E+00	2.45712E+01	-2.44123E+01	0.00000E+00	2.78927E+00	0.00000E+00	-1.25072E+01	0.00000E+00
3.66667E+00	2.57439E+01	-2.55776E+01	0.00000E+00	2.92142E+00	0.00000E+00	-1.23501E+01	0.00000E+00

3.70000E+00	2.69096E+01	-2.67398E+01	0.00000E+00	3.01860E+00	0.00000E+00	-1.22678E+01	0.00000E+00
3.73333E+00	2.80678E+01	-2.78984E+01	0.00000E+00	3.07923E+00	0.00000E+00	-1.22306E+01	0.00000E+00
3.76667E+00	2.92187E+01	-2.90534E+01	0.00000E+00	3.10389E+00	0.00000E+00	-1.22122E+01	0.00000E+00
3.80000E+00	3.03627E+01	-3.02048E+01	0.00000E+00	3.09278E+00	0.00000E+00	-1.22026E+01	0.00000E+00
3.83333E+00	3.15002E+01	-3.13525E+01	0.00000E+00	3.04715E+00	0.00000E+00	-1.21882E+01	0.00000E+00
3.86667E+00	3.26335E+01	-3.24973E+01	0.00000E+00	2.97872E+00	0.00000E+00	-1.20921E+01	0.00000E+00
3.90000E+00	3.37694E+01	-3.36453E+01	0.00000E+00	2.89213E+00	0.00000E+00	-1.19369E+01	0.00000E+00
3.93333E+00	3.49065E+01	-3.47959E+01	0.00000E+00	2.77557E+00	0.00000E+00	-1.18305E+01	0.00000E+00
3.96667E+00	3.60424E+01	-3.59468E+01	0.00000E+00	2.62351E+00	0.00000E+00	-1.17790E+01	0.00000E+00
4.00000E+00	3.71774E+01	-3.70975E+01	0.00000E+00	2.43675E+00	0.00000E+00	-1.17479E+01	0.00000E+00
4.03333E+00	3.83133E+01	-3.82481E+01	0.00000E+00	2.23436E+00	0.00000E+00	-1.17260E+01	0.00000E+00
4.06667E+00	3.94514E+01	-3.93987E+01	0.00000E+00	2.03775E+00	0.00000E+00	-1.17003E+01	0.00000E+00
4.10000E+00	4.05916E+01	-4.05494E+01	0.00000E+00	1.85178E+00	0.00000E+00	-1.16646E+01	0.00000E+00
4.13333E+00	4.17337E+01	-4.17000E+01	0.00000E+00	1.67725E+00	0.00000E+00	-1.16160E+01	0.00000E+00
4.16667E+00	4.28774E+01	-4.28506E+01	0.00000E+00	1.51451E+00	0.00000E+00	-1.15532E+01	0.00000E+00
4.20000E+00	4.40224E+01	-4.40012E+01	0.00000E+00	1.36389E+00	0.00000E+00	-1.14767E+01	0.00000E+00
4.23333E+00	4.51685E+01	-4.51518E+01	0.00000E+00	1.22574E+00	0.00000E+00	-1.13876E+01	0.00000E+00
4.26667E+00	4.63155E+01	-4.63025E+01	0.00000E+00	1.10043E+00	0.00000E+00	-1.12878E+01	0.00000E+00
4.30000E+00	4.74634E+01	-4.74531E+01	0.00000E+00	9.88212E-01	0.00000E+00	-1.11796E+01	0.00000E+00
4.33333E+00	4.86118E+01	-4.86037E+01	0.00000E+00	8.89203E-01	0.00000E+00	-1.10653E+01	0.00000E+00
4.36667E+00	4.97608E+01	-4.97543E+01	0.00000E+00	8.03344E-01	0.00000E+00	-1.09473E+01	0.00000E+00
4.40000E+00	5.09102E+01	-5.09049E+01	0.00000E+00	7.30463E-01	0.00000E+00	-1.08272E+01	0.00000E+00
4.43333E+00	5.20599E+01	-5.20556E+01	0.00000E+00	6.70141E-01	0.00000E+00	-1.07071E+01	0.00000E+00
4.46667E+00	5.32098E+01	-5.32062E+01	0.00000E+00	6.21725E-01	0.00000E+00	-1.05886E+01	0.00000E+00
4.50000E+00	5.43599E+01	-5.43568E+01	0.00000E+00	5.84364E-01	0.00000E+00	-1.04725E+01	0.00000E+00
4.53333E+00	5.55102E+01	-5.55074E+01	0.00000E+00	5.57060E-01	0.00000E+00	-1.03592E+01	0.00000E+00
4.56667E+00	5.66606E+01	-5.66580E+01	0.00000E+00	5.38717E-01	0.00000E+00	-1.02488E+01	0.00000E+00
4.60000E+00	5.78111E+01	-5.78087E+01	0.00000E+00	5.28187E-01	0.00000E+00	-1.01413E+01	0.00000E+00
4.63333E+00	5.89616E+01	-5.89593E+01	0.00000E+00	5.24307E-01	0.00000E+00	-1.00366E+01	0.00000E+00
4.66667E+00	6.01122E+01	-6.01099E+01	0.00000E+00	5.25935E-01	0.00000E+00	-9.93443E+00	0.00000E+00
4.70000E+00	6.12628E+01	-6.12605E+01	0.00000E+00	5.31975E-01	0.00000E+00	-9.83448E+00	0.00000E+00
4.73333E+00	6.24135E+01	-6.24111E+01	0.00000E+00	5.41411E-01	0.00000E+00	-9.73648E+00	0.00000E+00
4.76667E+00	6.35642E+01	-6.35618E+01	0.00000E+00	5.53317E-01	0.00000E+00	-9.64022E+00	0.00000E+00
4.80000E+00	6.47149E+01	-6.47124E+01	0.00000E+00	5.66875E-01	0.00000E+00	-9.54549E+00	0.00000E+00
4.83333E+00	6.58656E+01	-6.58630E+01	0.00000E+00	5.81348E-01	0.00000E+00	-9.45216E+00	0.00000E+00
4.86667E+00	6.70163E+01	-6.70136E+01	0.00000E+00	5.96167E-01	0.00000E+00	-9.36013E+00	0.00000E+00
4.90000E+00	6.81670E+01	-6.81642E+01	0.00000E+00	6.10846E-01	0.00000E+00	-9.26932E+00	0.00000E+00
4.93333E+00	6.93177E+01	-6.93148E+01	0.00000E+00	6.24997E-01	0.00000E+00	-9.17968E+00	0.00000E+00
4.96667E+00	7.04684E+01	-7.04655E+01	0.00000E+00	6.38326E-01	0.00000E+00	-9.09120E+00	0.00000E+00
5.00000E+00	7.16190E+01	-7.16161E+01	0.00000E+00	6.50621E-01	0.00000E+00	-9.00387E+00	0.00000E+00
5.03333E+00	7.27697E+01	-7.27667E+01	0.00000E+00	6.61748E-01	0.00000E+00	-8.91769E+00	0.00000E+00
5.06667E+00	7.39204E+01	-7.39173E+01	0.00000E+00	6.71634E-01	0.00000E+00	-8.83269E+00	0.00000E+00
5.10000E+00	7.50710E+01	-7.50679E+01	0.00000E+00	6.80259E-01	0.00000E+00	-8.74889E+00	0.00000E+00
5.13333E+00	7.62217E+01	-7.62186E+01	0.00000E+00	6.87645E-01	0.00000E+00	-8.66631E+00	0.00000E+00
5.16667E+00	7.73723E+01	-7.73692E+01	0.00000E+00	6.93848E-01	0.00000E+00	-8.58500E+00	0.00000E+00
5.20000E+00	7.85229E+01	-7.85198E+01	0.00000E+00	6.98950E-01	0.00000E+00	-8.50497E+00	0.00000E+00
5.23333E+00	7.96735E+01	-7.96704E+01	0.00000E+00	7.03049E-01	0.00000E+00	-8.42626E+00	0.00000E+00
5.26667E+00	8.08241E+01	-8.08210E+01	0.00000E+00	7.06257E-01	0.00000E+00	-8.34891E+00	0.00000E+00
5.30000E+00	8.19747E+01	-8.19717E+01	0.00000E+00	7.08689E-01	0.00000E+00	-8.27292E+00	0.00000E+00
5.33333E+00	8.31253E+01	-8.31223E+01	0.00000E+00	7.10463E-01	0.00000E+00	-8.19834E+00	0.00000E+00
5.36667E+00	8.42759E+01	-8.42729E+01	0.00000E+00	7.11692E-01	0.00000E+00	-8.12517E+00	0.00000E+00
5.40000E+00	8.54265E+01	-8.54235E+01	0.00000E+00	7.12486E-01	0.00000E+00	-8.05344E+00	0.00000E+00
5.43333E+00	8.65771E+01	-8.65741E+01	0.00000E+00	7.12945E-01	0.00000E+00	-7.98315E+00	0.00000E+00
5.46667E+00	8.77277E+01	-8.77248E+01	0.00000E+00	7.13159E-01	0.00000E+00	-7.91432E+00	0.00000E+00

5.50000E+00	8.88782E+01	-8.88754E+01	0.00000E+00	7.13210E-01	0.00000E+00	-7.84694E+00	0.00000E+00
5.53333E+00	9.00288E+01	-9.00260E+01	0.00000E+00	7.13168E-01	0.00000E+00	-7.78102E+00	0.00000E+00
5.56667E+00	9.11794E+01	-9.11766E+01	0.00000E+00	7.13092E-01	0.00000E+00	-7.71655E+00	0.00000E+00
5.60000E+00	9.23300E+01	-9.23272E+01	0.00000E+00	7.13030E-01	0.00000E+00	-7.65351E+00	0.00000E+00
5.63333E+00	9.34806E+01	-9.34779E+01	0.00000E+00	7.13021E-01	0.00000E+00	-7.59190E+00	0.00000E+00
5.66667E+00	9.46312E+01	-9.46285E+01	0.00000E+00	7.13093E-01	0.00000E+00	-7.53170E+00	0.00000E+00
5.70000E+00	9.57818E+01	-9.57791E+01	0.00000E+00	7.13265E-01	0.00000E+00	-7.47287E+00	0.00000E+00
5.73333E+00	9.69323E+01	-9.69297E+01	0.00000E+00	7.13551E-01	0.00000E+00	-7.41541E+00	0.00000E+00
5.76667E+00	9.80829E+01	-9.80803E+01	0.00000E+00	7.13957E-01	0.00000E+00	-7.35929E+00	0.00000E+00
5.80000E+00	9.92335E+01	-9.92310E+01	0.00000E+00	7.14484E-01	0.00000E+00	-7.30446E+00	0.00000E+00
5.83333E+00	1.00384E+02	-1.00382E+02	0.00000E+00	7.15128E-01	0.00000E+00	-7.25092E+00	0.00000E+00
5.86667E+00	1.01535E+02	-1.01532E+02	0.00000E+00	7.15882E-01	0.00000E+00	-7.19863E+00	0.00000E+00
5.90000E+00	1.02685E+02	-1.02683E+02	0.00000E+00	7.16736E-01	0.00000E+00	-7.14755E+00	0.00000E+00
5.93333E+00	1.03836E+02	-1.03833E+02	0.00000E+00	7.17678E-01	0.00000E+00	-7.09767E+00	0.00000E+00
5.96667E+00	1.04987E+02	-1.04984E+02	0.00000E+00	7.18697E-01	0.00000E+00	-7.04894E+00	0.00000E+00
6.00000E+00	1.06137E+02	-1.06135E+02	0.00000E+00	7.19778E-01	0.00000E+00	-7.00135E+00	0.00000E+00

1Boat 30 mph
Request Number 2002

Bullet Boat Velocity

Velocity of Marker 200100 relative to Marker 1002001

Time	Vm	Vx	Vy	Vz	Wm	Wx	Wy	Wz
0.00000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	0.00000E+00	1.00000E-03	0.00000E+00	1.00000E-03	0.00000E+00
3.33333E-02	4.40004E+01	-4.40000E+01	0.00000E+00	1.89817E-01	4.58689E-02	0.00000E+00	4.58689E-02	0.00000E+00
6.66667E-02	4.40013E+01	-4.40000E+01	0.00000E+00	3.32138E-01	6.74603E-02	0.00000E+00	6.74603E-02	0.00000E+00
1.00000E-01	4.40021E+01	-4.40000E+01	0.00000E+00	4.29422E-01	7.62262E-02	0.00000E+00	7.62262E-02	0.00000E+00
1.33333E-01	4.40027E+01	-4.40000E+01	0.00000E+00	4.86399E-01	7.83047E-02	0.00000E+00	7.83047E-02	0.00000E+00
1.66667E-01	4.40029E+01	-4.40000E+01	0.00000E+00	5.08359E-01	7.68827E-02	0.00000E+00	7.68827E-02	0.00000E+00
2.00000E-01	4.40029E+01	-4.40000E+01	0.00000E+00	5.00985E-01	7.35722E-02	0.00000E+00	7.35722E-02	0.00000E+00
2.33333E-01	4.40025E+01	-4.40000E+01	0.00000E+00	4.71167E-01	6.97084E-02	0.00000E+00	6.97084E-02	0.00000E+00
2.66667E-01	4.40021E+01	-4.40000E+01	0.00000E+00	4.25053E-01	6.58311E-02	0.00000E+00	6.58311E-02	0.00000E+00
3.00000E-01	4.40015E+01	-4.40000E+01	0.00000E+00	3.68057E-01	6.21177E-02	0.00000E+00	6.21177E-02	0.00000E+00
3.33333E-01	4.40011E+01	-4.40000E+01	0.00000E+00	3.05033E-01	5.86516E-02	0.00000E+00	5.86516E-02	0.00000E+00
3.66667E-01	4.40007E+01	-4.40000E+01	0.00000E+00	2.39694E-01	5.54500E-02	0.00000E+00	5.54500E-02	0.00000E+00
4.00000E-01	4.40003E+01	-4.40000E+01	0.00000E+00	1.75284E-01	5.25534E-02	0.00000E+00	5.25534E-02	0.00000E+00
4.33333E-01	4.40001E+01	-4.40000E+01	0.00000E+00	1.14031E-01	4.99647E-02	0.00000E+00	4.99647E-02	0.00000E+00
4.66667E-01	4.40000E+01	-4.40000E+01	0.00000E+00	5.76596E-02	4.76701E-02	0.00000E+00	4.76701E-02	0.00000E+00
5.00000E-01	4.40000E+01	-4.40000E+01	0.00000E+00	7.34550E-03	4.56470E-02	0.00000E+00	4.56470E-02	0.00000E+00
5.33333E-01	4.40000E+01	-4.40000E+01	0.00000E+00	-3.62546E-02	4.38681E-02	0.00000E+00	4.38681E-02	0.00000E+00
5.66667E-01	4.40001E+01	-4.40000E+01	0.00000E+00	-7.26660E-02	4.23004E-02	0.00000E+00	4.23004E-02	0.00000E+00
6.00000E-01	4.40001E+01	-4.40000E+01	0.00000E+00	-1.01882E-01	4.09131E-02	0.00000E+00	4.09131E-02	0.00000E+00
6.33333E-01	4.40002E+01	-4.40000E+01	0.00000E+00	-1.24215E-01	3.96780E-02	0.00000E+00	3.96780E-02	0.00000E+00
6.66667E-01	4.40002E+01	-4.40000E+01	0.00000E+00	-1.40180E-01	3.85687E-02	0.00000E+00	3.85687E-02	0.00000E+00
7.00000E-01	4.40003E+01	-4.40000E+01	0.00000E+00	-1.50392E-01	3.75608E-02	0.00000E+00	3.75608E-02	0.00000E+00
7.33333E-01	4.40003E+01	-4.40000E+01	0.00000E+00	-1.55610E-01	3.66339E-02	0.00000E+00	3.66339E-02	0.00000E+00
7.66667E-01	4.40003E+01	-4.40000E+01	0.00000E+00	-1.56578E-01	3.57699E-02	0.00000E+00	3.57699E-02	0.00000E+00
8.00000E-01	4.40003E+01	-4.40000E+01	0.00000E+00	-1.54046E-01	3.49534E-02	0.00000E+00	3.49534E-02	0.00000E+00
8.33333E-01	4.40003E+01	-4.40000E+01	0.00000E+00	-1.48740E-01	3.41716E-02	0.00000E+00	3.41716E-02	0.00000E+00
8.66667E-01	4.40002E+01	-4.40000E+01	0.00000E+00	-1.41340E-01	3.34145E-02	0.00000E+00	3.34145E-02	0.00000E+00
9.00000E-01	4.40002E+01	-4.40000E+01	0.00000E+00	-1.32469E-01	3.26739E-02	0.00000E+00	3.26739E-02	0.00000E+00
9.33333E-01	4.40002E+01	-4.40000E+01	0.00000E+00	-1.22676E-01	3.19440E-02	0.00000E+00	3.19440E-02	0.00000E+00
9.66667E-01	4.40001E+01	-4.40000E+01	0.00000E+00	-1.12431E-01	3.12209E-02	0.00000E+00	3.12209E-02	0.00000E+00
1.00000E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-1.02126E-01	3.05019E-02	0.00000E+00	3.05019E-02	0.00000E+00

1.03333E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-1.01636E-01	2.97883E-02	0.00000E+00	2.97883E-02	0.00000E+00
1.06667E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-1.09113E-01	2.90876E-02	0.00000E+00	2.90876E-02	0.00000E+00
1.10000E+00	4.40002E+01	-4.40000E+01	0.00000E+00	-1.17598E-01	2.84114E-02	0.00000E+00	2.84114E-02	0.00000E+00
1.13333E+00	4.40002E+01	-4.40000E+01	0.00000E+00	-1.23462E-01	2.77681E-02	0.00000E+00	2.77681E-02	0.00000E+00
1.16667E+00	4.40002E+01	-4.40000E+01	0.00000E+00	-1.25398E-01	2.71592E-02	0.00000E+00	2.71592E-02	0.00000E+00
1.20000E+00	4.40002E+01	-4.40000E+01	0.00000E+00	-1.23576E-01	2.65803E-02	0.00000E+00	2.65803E-02	0.00000E+00
1.23333E+00	4.40002E+01	-4.40000E+01	0.00000E+00	-1.18435E-01	2.60238E-02	0.00000E+00	2.60238E-02	0.00000E+00
1.26667E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-1.10344E-01	2.54817E-02	0.00000E+00	2.54817E-02	0.00000E+00
1.30000E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-9.96394E-02	2.49463E-02	0.00000E+00	2.49463E-02	0.00000E+00
1.33333E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-8.66968E-02	2.44111E-02	0.00000E+00	2.44111E-02	0.00000E+00
1.36667E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-7.19571E-02	2.38705E-02	0.00000E+00	2.38705E-02	0.00000E+00
1.40000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-5.59432E-02	2.33200E-02	0.00000E+00	2.33200E-02	0.00000E+00
1.43333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-3.92378E-02	2.27567E-02	0.00000E+00	2.27567E-02	0.00000E+00
1.46667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-2.24515E-02	2.21787E-02	0.00000E+00	2.21787E-02	0.00000E+00
1.50000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-6.17137E-03	2.15855E-02	0.00000E+00	2.15855E-02	0.00000E+00
1.53333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	9.02831E-03	2.09777E-02	0.00000E+00	2.09777E-02	0.00000E+00
1.56667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	2.26178E-02	2.03574E-02	0.00000E+00	2.03574E-02	0.00000E+00
1.60000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	3.41325E-02	1.97278E-02	0.00000E+00	1.97278E-02	0.00000E+00
1.63333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	4.31909E-02	1.90932E-02	0.00000E+00	1.90932E-02	0.00000E+00
1.66667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	4.95067E-02	1.84583E-02	0.00000E+00	1.84583E-02	0.00000E+00
1.70000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	5.28976E-02	1.78285E-02	0.00000E+00	1.78285E-02	0.00000E+00
1.73333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	5.32903E-02	1.72090E-02	0.00000E+00	1.72090E-02	0.00000E+00
1.76667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	5.07238E-02	1.66055E-02	0.00000E+00	1.66055E-02	0.00000E+00
1.80000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	4.53463E-02	1.60230E-02	0.00000E+00	1.60230E-02	0.00000E+00
1.83333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	3.74082E-02	1.54661E-02	0.00000E+00	1.54661E-02	0.00000E+00
1.86667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	2.72515E-02	1.49391E-02	0.00000E+00	1.49391E-02	0.00000E+00
1.90000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	1.52976E-02	1.44452E-02	0.00000E+00	1.44452E-02	0.00000E+00
1.93333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	2.02965E-03	1.39868E-02	0.00000E+00	1.39868E-02	0.00000E+00
1.96667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-1.20551E-02	1.35608E-02	0.00000E+00	1.35608E-02	0.00000E+00
2.00000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-2.64602E-02	1.31606E-02	0.00000E+00	1.31606E-02	0.00000E+00
2.03333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-4.06561E-02	1.27880E-02	0.00000E+00	1.27880E-02	0.00000E+00
2.06667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-5.40813E-02	1.24508E-02	0.00000E+00	1.24508E-02	0.00000E+00
2.10000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-6.61853E-02	1.21539E-02	0.00000E+00	1.21539E-02	0.00000E+00
2.13333E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-7.65008E-02	1.18928E-02	0.00000E+00	1.18928E-02	0.00000E+00
2.16667E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-8.46231E-02	1.16643E-02	0.00000E+00	1.16643E-02	0.00000E+00
2.20000E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-9.02330E-02	1.14644E-02	0.00000E+00	1.14644E-02	0.00000E+00
2.23333E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-9.31098E-02	1.12874E-02	0.00000E+00	1.12874E-02	0.00000E+00
2.26667E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-9.31388E-02	1.11275E-02	0.00000E+00	1.11275E-02	0.00000E+00
2.30000E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-9.03245E-02	1.09785E-02	0.00000E+00	1.09785E-02	0.00000E+00
2.33333E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-8.47692E-02	1.08340E-02	0.00000E+00	1.08340E-02	0.00000E+00
2.36667E+00	4.40001E+01	-4.40000E+01	0.00000E+00	-7.66734E-02	1.06881E-02	0.00000E+00	1.06881E-02	0.00000E+00
2.40000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-6.63131E-02	1.05349E-02	0.00000E+00	1.05349E-02	0.00000E+00
2.43333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-5.41025E-02	1.03693E-02	0.00000E+00	1.03693E-02	0.00000E+00
2.46667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-4.05003E-02	1.01872E-02	0.00000E+00	1.01872E-02	0.00000E+00
2.50000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-2.60136E-02	9.98521E-03	0.00000E+00	9.98521E-03	0.00000E+00
2.53333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-1.11814E-02	9.76123E-03	0.00000E+00	9.76123E-03	0.00000E+00
2.56667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	3.43580E-03	9.51428E-03	0.00000E+00	9.51428E-03	0.00000E+00
2.60000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	1.72132E-02	9.24496E-03	0.00000E+00	9.24496E-03	0.00000E+00
2.63333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	2.98479E-02	8.95419E-03	0.00000E+00	8.95419E-03	0.00000E+00
2.66667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	4.07907E-02	8.64454E-03	0.00000E+00	8.64454E-03	0.00000E+00
2.70000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	4.96476E-02	8.31945E-03	0.00000E+00	8.31945E-03	0.00000E+00
2.73333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	5.61126E-02	7.98313E-03	0.00000E+00	7.98313E-03	0.00000E+00
2.76667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	5.99764E-02	7.64049E-03	0.00000E+00	7.64049E-03	0.00000E+00
2.80000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	6.11200E-02	7.29669E-03	0.00000E+00	7.29669E-03	0.00000E+00

2.83333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	5.95267E-02	6.95701E-03	0.00000E+00	6.95701E-03	0.00000E+00
2.86667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	5.52837E-02	6.62673E-03	0.00000E+00	6.62673E-03	0.00000E+00
2.90000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	4.85778E-02	6.31088E-03	0.00000E+00	6.31088E-03	0.00000E+00
2.93333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	3.96665E-02	6.01425E-03	0.00000E+00	6.01425E-03	0.00000E+00
2.96667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	2.89345E-02	5.74079E-03	0.00000E+00	5.74079E-03	0.00000E+00
3.00000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	1.68077E-02	5.49376E-03	0.00000E+00	5.49376E-03	0.00000E+00
3.03333E+00	4.40000E+01	-4.40000E+01	0.00000E+00	3.75884E-03	5.27563E-03	0.00000E+00	5.27563E-03	0.00000E+00
3.06667E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-9.70760E-03	5.08797E-03	0.00000E+00	5.08797E-03	0.00000E+00
3.10000E+00	4.40000E+01	-4.40000E+01	0.00000E+00	-2.30640E-02	4.93135E-03	0.00000E+00	4.93135E-03	0.00000E+00
3.13333E+00	4.38753E+01	-4.38753E+01	0.00000E+00	2.95482E-02	2.95697E-02	0.00000E+00	2.95697E-02	0.00000E+00
3.16667E+00	4.33492E+01	-4.33483E+01	0.00000E+00	2.76360E-01	8.07201E-02	0.00000E+00	8.07201E-02	0.00000E+00
3.20000E+00	4.34903E+01	-4.34902E+01	0.00000E+00	1.08985E-01	4.29462E-03	0.00000E+00	-4.29462E-03	0.00000E+00
3.23333E+00	4.34247E+01	-4.34247E+01	0.00000E+00	4.59442E-02	8.96027E-03	0.00000E+00	-8.96027E-03	0.00000E+00
3.26667E+00	4.33139E+01	-4.33139E+01	0.00000E+00	7.59230E-03	3.51124E-03	0.00000E+00	-3.51124E-03	0.00000E+00
3.30000E+00	4.30433E+01	-4.30432E+01	0.00000E+00	6.46334E-02	3.45139E-02	0.00000E+00	3.45139E-02	0.00000E+00
3.33333E+00	4.01837E+01	-4.01294E+01	0.00000E+00	2.08990E+00	6.02800E-01	0.00000E+00	6.02800E-01	0.00000E+00
3.36667E+00	3.75861E+01	-3.70170E+01	0.00000E+00	6.51598E+00	1.32776E+00	0.00000E+00	1.32776E+00	0.00000E+00
3.40000E+00	3.70551E+01	-3.59650E+01	0.00000E+00	8.92186E+00	1.16983E+00	0.00000E+00	1.16983E+00	0.00000E+00
3.43333E+00	3.67998E+01	-3.58002E+01	0.00000E+00	8.51891E+00	5.97700E-01	0.00000E+00	5.97700E-01	0.00000E+00
3.46667E+00	3.65226E+01	-3.56916E+01	0.00000E+00	7.74631E+00	2.77083E-01	0.00000E+00	2.77083E-01	0.00000E+00
3.50000E+00	3.62399E+01	-3.55840E+01	0.00000E+00	6.86356E+00	1.22097E-01	0.00000E+00	1.22097E-01	0.00000E+00
3.53333E+00	3.59628E+01	-3.54576E+01	0.00000E+00	6.00700E+00	4.32807E-02	0.00000E+00	4.32807E-02	0.00000E+00
3.56667E+00	3.56852E+01	-3.52832E+01	0.00000E+00	5.34136E+00	1.21823E-02	0.00000E+00	-1.21823E-02	0.00000E+00
3.60000E+00	3.54245E+01	-3.50804E+01	0.00000E+00	4.92560E+00	7.46954E-02	0.00000E+00	-7.46954E-02	0.00000E+00
3.63333E+00	3.52763E+01	-3.49969E+01	0.00000E+00	4.43157E+00	1.00681E-01	0.00000E+00	-1.00681E-01	0.00000E+00
3.66667E+00	3.50888E+01	-3.49187E+01	0.00000E+00	3.45088E+00	5.90913E-02	0.00000E+00	-5.90913E-02	0.00000E+00
3.70000E+00	3.48916E+01	-3.48117E+01	0.00000E+00	2.35874E+00	2.75193E-02	0.00000E+00	-2.75193E-02	0.00000E+00
3.73333E+00	3.47270E+01	-3.47035E+01	0.00000E+00	1.27786E+00	1.36056E-02	0.00000E+00	-1.36056E-02	0.00000E+00
3.76667E+00	3.45967E+01	-3.45961E+01	0.00000E+00	2.03160E-01	7.01643E-03	0.00000E+00	-7.01643E-03	0.00000E+00
3.80000E+00	3.44997E+01	-3.44888E+01	0.00000E+00	-8.69310E-01	3.58005E-03	0.00000E+00	-3.58005E-03	0.00000E+00
3.83333E+00	3.44088E+01	-3.43612E+01	0.00000E+00	-1.80885E+00	1.99884E-02	0.00000E+00	-1.99884E-02	0.00000E+00
3.86667E+00	3.44385E+01	-3.43644E+01	0.00000E+00	-2.25713E+00	8.09041E-02	0.00000E+00	-8.09041E-02	0.00000E+00
3.90000E+00	3.46377E+01	-3.45086E+01	0.00000E+00	-2.98757E+00	7.27424E-02	0.00000E+00	-7.27424E-02	0.00000E+00
3.93333E+00	3.47600E+01	-3.45247E+01	0.00000E+00	-4.03782E+00	3.62422E-02	0.00000E+00	-3.62422E-02	0.00000E+00
3.96667E+00	3.48949E+01	-3.45208E+01	0.00000E+00	-5.09592E+00	1.82368E-02	0.00000E+00	-1.82368E-02	0.00000E+00
4.00000E+00	3.50578E+01	-3.45188E+01	0.00000E+00	-6.12397E+00	1.10175E-02	0.00000E+00	-1.10175E-02	0.00000E+00
4.03333E+00	3.50487E+01	-3.45186E+01	0.00000E+00	-6.07237E+00	1.13208E-02	0.00000E+00	-1.13208E-02	0.00000E+00
4.06667E+00	3.49948E+01	-3.45186E+01	0.00000E+00	-5.75328E+00	1.54596E-02	0.00000E+00	-1.54596E-02	0.00000E+00
4.10000E+00	3.49400E+01	-3.45186E+01	0.00000E+00	-5.41022E+00	2.17522E-02	0.00000E+00	-2.17522E-02	0.00000E+00
4.13333E+00	3.48878E+01	-3.45186E+01	0.00000E+00	-5.06217E+00	2.91107E-02	0.00000E+00	-2.91107E-02	0.00000E+00
4.16667E+00	3.48378E+01	-3.45186E+01	0.00000E+00	-4.70532E+00	3.65810E-02	0.00000E+00	-3.65810E-02	0.00000E+00
4.20000E+00	3.47900E+01	-3.45186E+01	0.00000E+00	-4.33701E+00	4.36759E-02	0.00000E+00	-4.36759E-02	0.00000E+00
4.23333E+00	3.47446E+01	-3.45186E+01	0.00000E+00	-3.95696E+00	4.99284E-02	0.00000E+00	-4.99284E-02	0.00000E+00
4.26667E+00	3.47024E+01	-3.45186E+01	0.00000E+00	-3.56691E+00	5.50457E-02	0.00000E+00	-5.50457E-02	0.00000E+00
4.30000E+00	3.46639E+01	-3.45186E+01	0.00000E+00	-3.17027E+00	5.88907E-02	0.00000E+00	-5.88907E-02	0.00000E+00
4.33333E+00	3.46297E+01	-3.45186E+01	0.00000E+00	-2.77211E+00	6.14184E-02	0.00000E+00	-6.14184E-02	0.00000E+00
4.36667E+00	3.46004E+01	-3.45186E+01	0.00000E+00	-2.37849E+00	6.27366E-02	0.00000E+00	-6.27366E-02	0.00000E+00
4.40000E+00	3.45761E+01	-3.45186E+01	0.00000E+00	-1.99387E+00	6.29789E-02	0.00000E+00	-6.29789E-02	0.00000E+00
4.43333E+00	3.45568E+01	-3.45186E+01	0.00000E+00	-1.62555E+00	6.24121E-02	0.00000E+00	-6.24121E-02	0.00000E+00
4.46667E+00	3.45423E+01	-3.45186E+01	0.00000E+00	-1.28042E+00	6.13557E-02	0.00000E+00	-6.13557E-02	0.00000E+00
4.50000E+00	3.45320E+01	-3.45186E+01	0.00000E+00	-9.63502E-01	6.00192E-02	0.00000E+00	-6.00192E-02	0.00000E+00
4.53333E+00	3.45252E+01	-3.45186E+01	0.00000E+00	-6.78269E-01	5.85356E-02	0.00000E+00	-5.85356E-02	0.00000E+00
4.56667E+00	3.45212E+01	-3.45186E+01	0.00000E+00	-4.26845E-01	5.70043E-02	0.00000E+00	-5.70043E-02	0.00000E+00
4.60000E+00	3.45192E+01	-3.45186E+01	0.00000E+00	-2.10169E-01	5.55054E-02	0.00000E+00	-5.55054E-02	0.00000E+00

4.63333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	-2.82419E-02	5.41215E-02	0.00000E+00	-5.41215E-02	0.00000E+00
4.66667E+00	3.45188E+01	-3.45186E+01	0.00000E+00	1.19987E-01	5.28885E-02	0.00000E+00	-5.28885E-02	0.00000E+00
4.70000E+00	3.45194E+01	-3.45186E+01	0.00000E+00	2.36469E-01	5.18028E-02	0.00000E+00	-5.18028E-02	0.00000E+00
4.73333E+00	3.45201E+01	-3.45186E+01	0.00000E+00	3.23803E-01	5.08446E-02	0.00000E+00	-5.08446E-02	0.00000E+00
4.76667E+00	3.45207E+01	-3.45186E+01	0.00000E+00	3.85002E-01	4.99919E-02	0.00000E+00	-4.99919E-02	0.00000E+00
4.80000E+00	3.45212E+01	-3.45186E+01	0.00000E+00	4.23313E-01	4.92237E-02	0.00000E+00	-4.92237E-02	0.00000E+00
4.83333E+00	3.45214E+01	-3.45186E+01	0.00000E+00	4.42070E-01	4.85202E-02	0.00000E+00	-4.85202E-02	0.00000E+00
4.86667E+00	3.45214E+01	-3.45186E+01	0.00000E+00	4.44611E-01	4.78637E-02	0.00000E+00	-4.78637E-02	0.00000E+00
4.90000E+00	3.45213E+01	-3.45186E+01	0.00000E+00	4.34068E-01	4.72382E-02	0.00000E+00	-4.72382E-02	0.00000E+00
4.93333E+00	3.45211E+01	-3.45186E+01	0.00000E+00	4.13364E-01	4.66303E-02	0.00000E+00	-4.66303E-02	0.00000E+00
4.96667E+00	3.45207E+01	-3.45186E+01	0.00000E+00	3.85162E-01	4.60291E-02	0.00000E+00	-4.60291E-02	0.00000E+00
5.00000E+00	3.45204E+01	-3.45186E+01	0.00000E+00	3.51829E-01	4.54265E-02	0.00000E+00	-4.54265E-02	0.00000E+00
5.03333E+00	3.45200E+01	-3.45186E+01	0.00000E+00	3.15416E-01	4.48165E-02	0.00000E+00	-4.48165E-02	0.00000E+00
5.06667E+00	3.45197E+01	-3.45186E+01	0.00000E+00	2.77652E-01	4.41951E-02	0.00000E+00	-4.41951E-02	0.00000E+00
5.10000E+00	3.45194E+01	-3.45186E+01	0.00000E+00	2.39967E-01	4.35597E-02	0.00000E+00	-4.35597E-02	0.00000E+00
5.13333E+00	3.45192E+01	-3.45186E+01	0.00000E+00	2.03505E-01	4.29088E-02	0.00000E+00	-4.29088E-02	0.00000E+00
5.16667E+00	3.45190E+01	-3.45186E+01	0.00000E+00	1.69145E-01	4.22418E-02	0.00000E+00	-4.22418E-02	0.00000E+00
5.20000E+00	3.45189E+01	-3.45186E+01	0.00000E+00	1.37527E-01	4.15587E-02	0.00000E+00	-4.15587E-02	0.00000E+00
5.23333E+00	3.45188E+01	-3.45186E+01	0.00000E+00	1.09080E-01	4.08601E-02	0.00000E+00	-4.08601E-02	0.00000E+00
5.26667E+00	3.45187E+01	-3.45186E+01	0.00000E+00	8.40521E-02	4.01470E-02	0.00000E+00	-4.01470E-02	0.00000E+00
5.30000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	6.25389E-02	3.94208E-02	0.00000E+00	-3.94208E-02	0.00000E+00
5.33333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	4.45109E-02	3.86832E-02	0.00000E+00	-3.86832E-02	0.00000E+00
5.36667E+00	3.45186E+01	-3.45186E+01	0.00000E+00	2.98362E-02	3.79360E-02	0.00000E+00	-3.79360E-02	0.00000E+00
5.40000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	1.83088E-02	3.71814E-02	0.00000E+00	-3.71814E-02	0.00000E+00
5.43333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	9.66800E-03	3.64218E-02	0.00000E+00	-3.64218E-02	0.00000E+00
5.46667E+00	3.45186E+01	-3.45186E+01	0.00000E+00	3.61276E-03	3.56594E-02	0.00000E+00	-3.56594E-02	0.00000E+00
5.50000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	-1.78419E-04	3.48967E-02	0.00000E+00	-3.48967E-02	0.00000E+00
5.53333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	-2.03556E-03	3.41362E-02	0.00000E+00	-3.41362E-02	0.00000E+00
5.56667E+00	3.45186E+01	-3.45186E+01	0.00000E+00	-2.28561E-03	3.33801E-02	0.00000E+00	-3.33801E-02	0.00000E+00
5.60000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	-1.24326E-03	3.26307E-02	0.00000E+00	-3.26307E-02	0.00000E+00
5.63333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	7.97069E-04	3.18899E-02	0.00000E+00	-3.18899E-02	0.00000E+00
5.66667E+00	3.45186E+01	-3.45186E+01	0.00000E+00	3.56625E-03	3.11594E-02	0.00000E+00	-3.11594E-02	0.00000E+00
5.70000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	6.82374E-03	3.04408E-02	0.00000E+00	-3.04408E-02	0.00000E+00
5.73333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	1.03596E-02	2.97353E-02	0.00000E+00	-2.97353E-02	0.00000E+00
5.76667E+00	3.45186E+01	-3.45186E+01	0.00000E+00	1.39949E-02	2.90438E-02	0.00000E+00	-2.90438E-02	0.00000E+00
5.80000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	1.75818E-02	2.83671E-02	0.00000E+00	-2.83671E-02	0.00000E+00
5.83333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	2.10018E-02	2.77056E-02	0.00000E+00	-2.77056E-02	0.00000E+00
5.86667E+00	3.45186E+01	-3.45186E+01	0.00000E+00	2.41644E-02	2.70595E-02	0.00000E+00	-2.70595E-02	0.00000E+00
5.90000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	2.70043E-02	2.64289E-02	0.00000E+00	-2.64289E-02	0.00000E+00
5.93333E+00	3.45186E+01	-3.45186E+01	0.00000E+00	2.94785E-02	2.58136E-02	0.00000E+00	-2.58136E-02	0.00000E+00
5.96667E+00	3.45186E+01	-3.45186E+01	0.00000E+00	3.15634E-02	2.52135E-02	0.00000E+00	-2.52135E-02	0.00000E+00
6.00000E+00	3.45186E+01	-3.45186E+01	0.00000E+00	3.32525E-02	2.46282E-02	0.00000E+00	-2.46282E-02	0.00000E+00

1Boat 30 mph
Request Number 2003

Bullet Boat Acceleration

Acceleration of Marker 200100 relative to Marker 1002001

Time	Accm	Accx	Accy	Accz	Wmdot	Wxdot	Wydot	Wzdot
0.00000E+00	6.41979E+00	0.00000E+00	0.00000E+00	6.41979E+00	1.85504E+00	0.00000E+00	1.85504E+00	0.00000E+00
3.33333E-02	4.97738E+00	0.00000E+00	0.00000E+00	4.97738E+00	9.01222E-01	0.00000E+00	9.01222E-01	0.00000E+00
6.66667E-02	3.56705E+00	0.00000E+00	0.00000E+00	3.56705E+00	3.91083E-01	0.00000E+00	3.91083E-01	0.00000E+00
1.00000E-01	2.27398E+00	0.00000E+00	0.00000E+00	2.27398E+00	1.26696E-01	0.00000E+00	1.26696E-01	0.00000E+00
1.33333E-01	1.14670E+00	0.00000E+00	0.00000E+00	1.14670E+00	7.14627E-03	0.00000E+00	-7.14627E-03	0.00000E+00

1.66667E-01	1.86003E-01	0.00000E+00	0.00000E+00	1.86003E-01	7.51390E-02	0.00000E+00	-7.51390E-02	0.00000E+00
2.00000E-01	5.82167E-01	0.00000E+00	0.00000E+00	-5.82167E-01	1.01521E-01	0.00000E+00	-1.01521E-01	0.00000E+00
2.33333E-01	1.16125E+00	0.00000E+00	0.00000E+00	-1.16125E+00	1.10332E-01	0.00000E+00	-1.10332E-01	0.00000E+00
2.66667E-01	1.56636E+00	0.00000E+00	0.00000E+00	-1.56636E+00	1.11122E-01	0.00000E+00	-1.11122E-01	0.00000E+00
3.00000E-01	1.81901E+00	0.00000E+00	0.00000E+00	-1.81901E+00	1.07171E-01	0.00000E+00	-1.07171E-01	0.00000E+00
3.33333E-01	1.94288E+00	0.00000E+00	0.00000E+00	-1.94288E+00	1.00344E-01	0.00000E+00	-1.00344E-01	0.00000E+00
3.66667E-01	1.96219E+00	0.00000E+00	0.00000E+00	-1.96219E+00	9.15611E-02	0.00000E+00	-9.15611E-02	0.00000E+00
4.00000E-01	1.90009E+00	0.00000E+00	0.00000E+00	-1.90009E+00	8.22414E-02	0.00000E+00	-8.22414E-02	0.00000E+00
4.33333E-01	1.77586E+00	0.00000E+00	0.00000E+00	-1.77586E+00	7.31088E-02	0.00000E+00	-7.31088E-02	0.00000E+00
4.66667E-01	1.60743E+00	0.00000E+00	0.00000E+00	-1.60743E+00	6.45829E-02	0.00000E+00	-6.45829E-02	0.00000E+00
5.00000E-01	1.41014E+00	0.00000E+00	0.00000E+00	-1.41014E+00	5.68761E-02	0.00000E+00	-5.68761E-02	0.00000E+00
5.33333E-01	1.19652E+00	0.00000E+00	0.00000E+00	-1.19652E+00	5.00805E-02	0.00000E+00	-5.00805E-02	0.00000E+00
5.66667E-01	9.79542E-01	0.00000E+00	0.00000E+00	-9.79542E-01	4.42031E-02	0.00000E+00	-4.42031E-02	0.00000E+00
6.00000E-01	7.68469E-01	0.00000E+00	0.00000E+00	-7.68469E-01	3.92144E-02	0.00000E+00	-3.92144E-02	0.00000E+00
6.33333E-01	5.69905E-01	0.00000E+00	0.00000E+00	-5.69905E-01	3.50574E-02	0.00000E+00	-3.50574E-02	0.00000E+00
6.66667E-01	3.88522E-01	0.00000E+00	0.00000E+00	-3.88522E-01	3.16551E-02	0.00000E+00	-3.16551E-02	0.00000E+00
7.00000E-01	2.27788E-01	0.00000E+00	0.00000E+00	-2.27788E-01	2.89249E-02	0.00000E+00	-2.89249E-02	0.00000E+00
7.33333E-01	8.90269E-02	0.00000E+00	0.00000E+00	-8.90269E-02	2.67811E-02	0.00000E+00	-2.67811E-02	0.00000E+00
7.66667E-01	2.71596E-02	0.00000E+00	0.00000E+00	2.71596E-02	2.51396E-02	0.00000E+00	-2.51396E-02	0.00000E+00
8.00000E-01	1.21086E-01	0.00000E+00	0.00000E+00	1.21086E-01	2.39190E-02	0.00000E+00	-2.39190E-02	0.00000E+00
8.33333E-01	1.93825E-01	0.00000E+00	0.00000E+00	1.93825E-01	2.30399E-02	0.00000E+00	-2.30399E-02	0.00000E+00
8.66667E-01	2.47000E-01	0.00000E+00	0.00000E+00	2.47000E-01	2.24302E-02	0.00000E+00	-2.24302E-02	0.00000E+00
9.00000E-01	2.82573E-01	0.00000E+00	0.00000E+00	2.82573E-01	2.20273E-02	0.00000E+00	-2.20273E-02	0.00000E+00
9.33333E-01	3.02805E-01	0.00000E+00	0.00000E+00	3.02805E-01	2.17723E-02	0.00000E+00	-2.17723E-02	0.00000E+00
9.66667E-01	3.10048E-01	0.00000E+00	0.00000E+00	3.10048E-01	2.16183E-02	0.00000E+00	-2.16183E-02	0.00000E+00
1.00000E+00	3.06633E-01	0.00000E+00	0.00000E+00	3.06633E-01	2.15215E-02	0.00000E+00	-2.15215E-02	0.00000E+00
1.03333E+00	3.02316E-01	0.00000E+00	0.00000E+00	-3.02316E-01	2.12884E-02	0.00000E+00	-2.12884E-02	0.00000E+00
1.06667E+00	2.37463E-01	0.00000E+00	0.00000E+00	-2.37463E-01	2.07032E-02	0.00000E+00	-2.07032E-02	0.00000E+00
1.10000E+00	1.61727E-01	0.00000E+00	0.00000E+00	-1.61727E-01	1.97709E-02	0.00000E+00	-1.97709E-02	0.00000E+00
1.13333E+00	7.58289E-02	0.00000E+00	0.00000E+00	-7.58289E-02	1.87055E-02	0.00000E+00	-1.87055E-02	0.00000E+00
1.16667E+00	1.60691E-02	0.00000E+00	0.00000E+00	1.60691E-02	1.77312E-02	0.00000E+00	-1.77312E-02	0.00000E+00
1.20000E+00	1.09317E-01	0.00000E+00	0.00000E+00	1.09317E-01	1.69631E-02	0.00000E+00	-1.69631E-02	0.00000E+00
1.23333E+00	1.99630E-01	0.00000E+00	0.00000E+00	1.99630E-01	1.64325E-02	0.00000E+00	-1.64325E-02	0.00000E+00
1.26667E+00	2.83266E-01	0.00000E+00	0.00000E+00	2.83266E-01	1.61315E-02	0.00000E+00	-1.61315E-02	0.00000E+00
1.30000E+00	3.57007E-01	0.00000E+00	0.00000E+00	3.57007E-01	1.60349E-02	0.00000E+00	-1.60349E-02	0.00000E+00
1.33333E+00	4.18078E-01	0.00000E+00	0.00000E+00	4.18078E-01	1.61184E-02	0.00000E+00	-1.61184E-02	0.00000E+00
1.36667E+00	4.64161E-01	0.00000E+00	0.00000E+00	4.64161E-01	1.63477E-02	0.00000E+00	-1.63477E-02	0.00000E+00
1.40000E+00	4.93546E-01	0.00000E+00	0.00000E+00	4.93546E-01	1.66919E-02	0.00000E+00	-1.66919E-02	0.00000E+00
1.43333E+00	5.05245E-01	0.00000E+00	0.00000E+00	5.05245E-01	1.71129E-02	0.00000E+00	-1.71129E-02	0.00000E+00
1.46667E+00	4.98948E-01	0.00000E+00	0.00000E+00	4.98948E-01	1.75694E-02	0.00000E+00	-1.75694E-02	0.00000E+00
1.50000E+00	4.74975E-01	0.00000E+00	0.00000E+00	4.74975E-01	1.80226E-02	0.00000E+00	-1.80226E-02	0.00000E+00
1.53333E+00	4.34341E-01	0.00000E+00	0.00000E+00	4.34341E-01	1.84335E-02	0.00000E+00	-1.84335E-02	0.00000E+00
1.56667E+00	3.78679E-01	0.00000E+00	0.00000E+00	3.78679E-01	1.87683E-02	0.00000E+00	-1.87683E-02	0.00000E+00
1.60000E+00	3.10273E-01	0.00000E+00	0.00000E+00	3.10273E-01	1.89862E-02	0.00000E+00	-1.89862E-02	0.00000E+00
1.63333E+00	2.31782E-01	0.00000E+00	0.00000E+00	2.31782E-01	1.90680E-02	0.00000E+00	-1.90680E-02	0.00000E+00
1.66667E+00	1.46209E-01	0.00000E+00	0.00000E+00	1.46209E-01	1.89978E-02	0.00000E+00	-1.89978E-02	0.00000E+00
1.70000E+00	5.68001E-02	0.00000E+00	0.00000E+00	5.68001E-02	1.87653E-02	0.00000E+00	-1.87653E-02	0.00000E+00
1.73333E+00	3.30982E-02	0.00000E+00	0.00000E+00	-3.30982E-02	1.83698E-02	0.00000E+00	-1.83698E-02	0.00000E+00
1.76667E+00	1.20154E-01	0.00000E+00	0.00000E+00	-1.20154E-01	1.78144E-02	0.00000E+00	-1.78144E-02	0.00000E+00
1.80000E+00	2.01190E-01	0.00000E+00	0.00000E+00	-2.01190E-01	1.71111E-02	0.00000E+00	-1.71111E-02	0.00000E+00
1.83333E+00	2.73281E-01	0.00000E+00	0.00000E+00	-2.73281E-01	1.62758E-02	0.00000E+00	-1.62758E-02	0.00000E+00
1.86667E+00	3.33872E-01	0.00000E+00	0.00000E+00	-3.33872E-01	1.53285E-02	0.00000E+00	-1.53285E-02	0.00000E+00
1.90000E+00	3.80846E-01	0.00000E+00	0.00000E+00	-3.80846E-01	1.42946E-02	0.00000E+00	-1.42946E-02	0.00000E+00
1.93333E+00	4.12596E-01	0.00000E+00	0.00000E+00	-4.12596E-01	1.31976E-02	0.00000E+00	-1.31976E-02	0.00000E+00

1.96667E+00	4.30010E-01	0.00000E+00	0.00000E+00	-4.30010E-01	1.24065E-02	0.00000E+00	-1.24065E-02	0.00000E+00
2.00000E+00	4.32096E-01	0.00000E+00	0.00000E+00	-4.32096E-01	1.16818E-02	0.00000E+00	-1.16818E-02	0.00000E+00
2.03333E+00	4.16986E-01	0.00000E+00	0.00000E+00	-4.16986E-01	1.06295E-02	0.00000E+00	-1.06295E-02	0.00000E+00
2.06667E+00	3.85350E-01	0.00000E+00	0.00000E+00	-3.85350E-01	9.46345E-03	0.00000E+00	-9.46345E-03	0.00000E+00
2.10000E+00	3.38516E-01	0.00000E+00	0.00000E+00	-3.38516E-01	8.35939E-03	0.00000E+00	-8.35939E-03	0.00000E+00
2.13333E+00	2.78380E-01	0.00000E+00	0.00000E+00	-2.78380E-01	7.32239E-03	0.00000E+00	-7.32239E-03	0.00000E+00
2.16667E+00	2.07331E-01	0.00000E+00	0.00000E+00	-2.07331E-01	6.39720E-03	0.00000E+00	-6.39720E-03	0.00000E+00
2.20000E+00	1.28142E-01	0.00000E+00	0.00000E+00	-1.28142E-01	5.62495E-03	0.00000E+00	-5.62495E-03	0.00000E+00
2.23333E+00	4.38820E-02	0.00000E+00	0.00000E+00	-4.38820E-02	5.02209E-03	0.00000E+00	-5.02209E-03	0.00000E+00
2.26667E+00	4.21939E-02	0.00000E+00	0.00000E+00	4.21939E-02	4.60302E-03	0.00000E+00	-4.60302E-03	0.00000E+00
2.30000E+00	1.26809E-01	0.00000E+00	0.00000E+00	1.26809E-01	4.37116E-03	0.00000E+00	-4.37116E-03	0.00000E+00
2.33333E+00	2.06744E-01	0.00000E+00	0.00000E+00	2.06744E-01	4.32634E-03	0.00000E+00	-4.32634E-03	0.00000E+00
2.36667E+00	2.78982E-01	0.00000E+00	0.00000E+00	2.78982E-01	4.46037E-03	0.00000E+00	-4.46037E-03	0.00000E+00
2.40000E+00	3.40704E-01	0.00000E+00	0.00000E+00	3.40704E-01	4.75855E-03	0.00000E+00	-4.75855E-03	0.00000E+00
2.43333E+00	3.89646E-01	0.00000E+00	0.00000E+00	3.89646E-01	5.19681E-03	0.00000E+00	-5.19681E-03	0.00000E+00
2.46667E+00	4.24008E-01	0.00000E+00	0.00000E+00	4.24008E-01	5.74848E-03	0.00000E+00	-5.74848E-03	0.00000E+00
2.50000E+00	4.42549E-01	0.00000E+00	0.00000E+00	4.42549E-01	6.38244E-03	0.00000E+00	-6.38244E-03	0.00000E+00
2.53333E+00	4.44651E-01	0.00000E+00	0.00000E+00	4.44651E-01	7.06361E-03	0.00000E+00	-7.06361E-03	0.00000E+00
2.56667E+00	4.30342E-01	0.00000E+00	0.00000E+00	4.30342E-01	7.75454E-03	0.00000E+00	-7.75454E-03	0.00000E+00
2.60000E+00	4.00553E-01	0.00000E+00	0.00000E+00	4.00553E-01	8.41531E-03	0.00000E+00	-8.41531E-03	0.00000E+00
2.63333E+00	3.56072E-01	0.00000E+00	0.00000E+00	3.56072E-01	9.02269E-03	0.00000E+00	-9.02269E-03	0.00000E+00
2.66667E+00	2.98821E-01	0.00000E+00	0.00000E+00	2.98821E-01	9.54089E-03	0.00000E+00	-9.54089E-03	0.00000E+00
2.70000E+00	2.31043E-01	0.00000E+00	0.00000E+00	2.31043E-01	9.94332E-03	0.00000E+00	-9.94332E-03	0.00000E+00
2.73333E+00	1.55411E-01	0.00000E+00	0.00000E+00	1.55411E-01	1.02083E-02	0.00000E+00	-1.02083E-02	0.00000E+00
2.76667E+00	7.48223E-02	0.00000E+00	0.00000E+00	7.48223E-02	1.03236E-02	0.00000E+00	-1.03236E-02	0.00000E+00
2.80000E+00	7.68725E-03	0.00000E+00	0.00000E+00	-7.68725E-03	1.02805E-02	0.00000E+00	-1.02805E-02	0.00000E+00
2.83333E+00	8.90207E-02	0.00000E+00	0.00000E+00	-8.90207E-02	1.00753E-02	0.00000E+00	-1.00753E-02	0.00000E+00
2.86667E+00	1.66163E-01	0.00000E+00	0.00000E+00	-1.66163E-01	9.71510E-03	0.00000E+00	-9.71510E-03	0.00000E+00
2.90000E+00	2.36253E-01	0.00000E+00	0.00000E+00	-2.36253E-01	9.20825E-03	0.00000E+00	-9.20825E-03	0.00000E+00
2.93333E+00	2.96637E-01	0.00000E+00	0.00000E+00	-2.96637E-01	8.56999E-03	0.00000E+00	-8.56999E-03	0.00000E+00
2.96667E+00	3.45163E-01	0.00000E+00	0.00000E+00	-3.45163E-01	7.82134E-03	0.00000E+00	-7.82134E-03	0.00000E+00
3.00000E+00	3.80133E-01	0.00000E+00	0.00000E+00	-3.80133E-01	6.98656E-03	0.00000E+00	-6.98656E-03	0.00000E+00
3.03333E+00	4.00324E-01	0.00000E+00	0.00000E+00	-4.00324E-01	6.09113E-03	0.00000E+00	-6.09113E-03	0.00000E+00
3.06667E+00	4.05095E-01	0.00000E+00	0.00000E+00	-4.05095E-01	5.16434E-03	0.00000E+00	-5.16434E-03	0.00000E+00
3.10000E+00	3.94366E-01	0.00000E+00	0.00000E+00	-3.94366E-01	4.23231E-03	0.00000E+00	-4.23231E-03	0.00000E+00
3.13333E+00	2.42640E+01	2.14214E+01	0.00000E+00	1.13959E+01	4.45423E+00	0.00000E+00	4.45423E+00	0.00000E+00
3.16667E+00	2.55088E+00	2.41500E+00	0.00000E+00	-8.21425E-01	1.63383E+00	0.00000E+00	-1.63383E+00	0.00000E+00
3.20000E+00	3.40916E+00	3.22000E+00	0.00000E+00	-1.11979E+00	8.82567E-02	0.00000E+00	8.82567E-02	0.00000E+00
3.23333E+00	3.43332E+00	3.22000E+00	0.00000E+00	-1.19134E+00	1.86001E-01	0.00000E+00	1.86001E-01	0.00000E+00
3.26667E+00	3.43859E+00	3.22000E+00	0.00000E+00	-1.20643E+00	7.63833E-02	0.00000E+00	7.63833E-02	0.00000E+00
3.30000E+00	3.32856E+01	2.97306E+01	0.00000E+00	1.49675E+01	5.96223E+00	0.00000E+00	5.96223E+00	0.00000E+00
3.33333E+00	1.65002E+02	1.25144E+02	0.00000E+00	1.07539E+02	2.56316E+01	0.00000E+00	2.56316E+01	0.00000E+00
3.36667E+00	1.45085E+02	5.74172E+01	0.00000E+00	1.33240E+02	1.26888E+01	0.00000E+00	1.26888E+01	0.00000E+00
3.40000E+00	1.59512E+01	1.01653E+01	0.00000E+00	1.22926E+01	1.80710E+01	0.00000E+00	-1.80710E+01	0.00000E+00
3.43333E+00	2.16478E+01	3.22000E+00	0.00000E+00	-2.14070E+01	1.32843E+01	0.00000E+00	-1.32843E+01	0.00000E+00
3.46667E+00	2.53454E+01	3.22000E+00	0.00000E+00	-2.51400E+01	6.44893E+00	0.00000E+00	-6.44893E+00	0.00000E+00
3.50000E+00	2.78336E+01	3.25315E+00	0.00000E+00	-2.76428E+01	3.04613E+00	0.00000E+00	-3.04613E+00	0.00000E+00
3.53333E+00	2.18809E+01	4.75981E+00	0.00000E+00	-2.13569E+01	2.05895E+00	0.00000E+00	-2.05895E+00	0.00000E+00
3.56667E+00	1.70205E+01	6.15206E+00	0.00000E+00	-1.58698E+01	1.93442E+00	0.00000E+00	-1.93442E+00	0.00000E+00
3.60000E+00	1.02549E+01	6.32966E+00	0.00000E+00	-8.06841E+00	2.29594E+00	0.00000E+00	-2.29594E+00	0.00000E+00
3.63333E+00	2.40887E+01	2.55012E-01	0.00000E+00	-2.40874E+01	8.69928E-01	0.00000E+00	8.69928E-01	0.00000E+00
3.66667E+00	3.24385E+01	3.22000E+00	0.00000E+00	-3.22783E+01	1.19751E+00	0.00000E+00	1.19751E+00	0.00000E+00
3.70000E+00	3.24893E+01	3.22000E+00	0.00000E+00	-3.23293E+01	5.63818E-01	0.00000E+00	5.63818E-01	0.00000E+00
3.73333E+00	3.24447E+01	3.22000E+00	0.00000E+00	-3.22845E+01	2.80834E-01	0.00000E+00	2.80834E-01	0.00000E+00

3.76667E+00	3.23740E+01	3.22000E+00	0.00000E+00	-3.22134E+01	1.44826E-01	0.00000E+00	1.44826E-01	0.00000E+00
3.80000E+00	3.23034E+01	3.22000E+00	0.00000E+00	-3.21425E+01	7.38959E-02	0.00000E+00	7.38959E-02	0.00000E+00
3.83333E+00	1.86196E+01	5.79633E+00	0.00000E+00	-1.76945E+01	1.96194E+00	0.00000E+00	-1.96194E+00	0.00000E+00
3.86667E+00	1.41028E+01	-6.49669E+00	0.00000E+00	-1.25173E+01	1.15361E+00	0.00000E+00	-1.15361E+00	0.00000E+00
3.90000E+00	3.18529E+01	0.00000E+00	0.00000E+00	-3.18529E+01	1.47935E+00	0.00000E+00	1.47935E+00	0.00000E+00
3.93333E+00	3.16185E+01	0.00000E+00	0.00000E+00	-3.16185E+01	7.04342E-01	0.00000E+00	7.04342E-01	0.00000E+00
3.96667E+00	3.11780E+01	0.00000E+00	0.00000E+00	-3.11780E+01	2.87630E-01	0.00000E+00	2.87630E-01	0.00000E+00
4.00000E+00	3.03334E+01	0.00000E+00	0.00000E+00	-3.03334E+01	4.98961E-02	0.00000E+00	4.98961E-02	0.00000E+00
4.03333E+00	1.07682E+01	0.00000E+00	0.00000E+00	1.07682E+01	8.43088E-02	0.00000E+00	-8.43088E-02	0.00000E+00
4.06667E+00	1.04633E+01	0.00000E+00	0.00000E+00	1.04633E+01	1.66687E-01	0.00000E+00	-1.66687E-01	0.00000E+00
4.10000E+00	1.03711E+01	0.00000E+00	0.00000E+00	1.03711E+01	2.12337E-01	0.00000E+00	-2.12337E-01	0.00000E+00
4.13333E+00	1.05349E+01	0.00000E+00	0.00000E+00	1.05349E+01	2.29398E-01	0.00000E+00	-2.29398E-01	0.00000E+00
4.16667E+00	1.08373E+01	0.00000E+00	0.00000E+00	1.08373E+01	2.25786E-01	0.00000E+00	-2.25786E-01	0.00000E+00
4.20000E+00	1.12214E+01	0.00000E+00	0.00000E+00	1.12214E+01	2.07220E-01	0.00000E+00	-2.07220E-01	0.00000E+00
4.23333E+00	1.15775E+01	0.00000E+00	0.00000E+00	1.15775E+01	1.74936E-01	0.00000E+00	-1.74936E-01	0.00000E+00
4.26667E+00	1.18519E+01	0.00000E+00	0.00000E+00	1.18519E+01	1.36490E-01	0.00000E+00	-1.36490E-01	0.00000E+00
4.30000E+00	1.19978E+01	0.00000E+00	0.00000E+00	1.19978E+01	9.62647E-02	0.00000E+00	-9.62647E-02	0.00000E+00
4.33333E+00	1.19677E+01	0.00000E+00	0.00000E+00	1.19677E+01	5.60731E-02	0.00000E+00	-5.60731E-02	0.00000E+00
4.36667E+00	1.17402E+01	0.00000E+00	0.00000E+00	1.17402E+01	2.14031E-02	0.00000E+00	-2.14031E-02	0.00000E+00
4.40000E+00	1.13239E+01	0.00000E+00	0.00000E+00	1.13239E+01	6.90375E-03	0.00000E+00	6.90375E-03	0.00000E+00
4.43333E+00	1.07218E+01	0.00000E+00	0.00000E+00	1.07218E+01	2.62933E-02	0.00000E+00	2.62933E-02	0.00000E+00
4.46667E+00	9.93760E+00	0.00000E+00	0.00000E+00	9.93760E+00	3.58399E-02	0.00000E+00	3.58399E-02	0.00000E+00
4.50000E+00	9.03370E+00	0.00000E+00	0.00000E+00	9.03370E+00	4.22014E-02	0.00000E+00	4.22014E-02	0.00000E+00
4.53333E+00	8.04715E+00	0.00000E+00	0.00000E+00	8.04715E+00	4.53865E-02	0.00000E+00	4.53865E-02	0.00000E+00
4.56667E+00	7.01433E+00	0.00000E+00	0.00000E+00	7.01433E+00	4.56613E-02	0.00000E+00	4.56613E-02	0.00000E+00
4.60000E+00	5.96966E+00	0.00000E+00	0.00000E+00	5.96966E+00	4.36753E-02	0.00000E+00	4.36753E-02	0.00000E+00
4.63333E+00	4.93656E+00	0.00000E+00	0.00000E+00	4.93656E+00	3.89701E-02	0.00000E+00	3.89701E-02	0.00000E+00
4.66667E+00	3.95190E+00	0.00000E+00	0.00000E+00	3.95190E+00	3.43654E-02	0.00000E+00	3.43654E-02	0.00000E+00
4.70000E+00	3.03781E+00	0.00000E+00	0.00000E+00	3.03781E+00	3.04006E-02	0.00000E+00	3.04006E-02	0.00000E+00
4.73333E+00	2.20876E+00	0.00000E+00	0.00000E+00	2.20876E+00	2.70280E-02	0.00000E+00	2.70280E-02	0.00000E+00
4.76667E+00	1.47409E+00	0.00000E+00	0.00000E+00	1.47409E+00	2.42225E-02	0.00000E+00	2.42225E-02	0.00000E+00
4.80000E+00	8.38478E-01	0.00000E+00	0.00000E+00	8.38478E-01	2.19856E-02	0.00000E+00	2.19856E-02	0.00000E+00
4.83333E+00	3.03392E-01	0.00000E+00	0.00000E+00	3.03392E-01	2.03148E-02	0.00000E+00	2.03148E-02	0.00000E+00
4.86667E+00	1.35150E-01	0.00000E+00	0.00000E+00	-1.35150E-01	1.91567E-02	0.00000E+00	1.91567E-02	0.00000E+00
4.90000E+00	4.82510E-01	0.00000E+00	0.00000E+00	-4.82510E-01	1.84427E-02	0.00000E+00	1.84427E-02	0.00000E+00
4.93333E+00	7.45909E-01	0.00000E+00	0.00000E+00	-7.45909E-01	1.80918E-02	0.00000E+00	1.80918E-02	0.00000E+00
4.96667E+00	9.33851E-01	0.00000E+00	0.00000E+00	-9.33851E-01	1.80235E-02	0.00000E+00	1.80235E-02	0.00000E+00
5.00000E+00	1.05557E+00	0.00000E+00	0.00000E+00	-1.05557E+00	1.81654E-02	0.00000E+00	1.81654E-02	0.00000E+00
5.03333E+00	1.12056E+00	0.00000E+00	0.00000E+00	-1.12056E+00	1.84541E-02	0.00000E+00	1.84541E-02	0.00000E+00
5.06667E+00	1.13814E+00	0.00000E+00	0.00000E+00	-1.13814E+00	1.88423E-02	0.00000E+00	1.88423E-02	0.00000E+00
5.10000E+00	1.11725E+00	0.00000E+00	0.00000E+00	-1.11725E+00	1.92896E-02	0.00000E+00	1.92896E-02	0.00000E+00
5.13333E+00	1.06616E+00	0.00000E+00	0.00000E+00	-1.06616E+00	1.97675E-02	0.00000E+00	1.97675E-02	0.00000E+00
5.16667E+00	9.92441E-01	0.00000E+00	0.00000E+00	-9.92441E-01	2.02534E-02	0.00000E+00	2.02534E-02	0.00000E+00
5.20000E+00	9.02809E-01	0.00000E+00	0.00000E+00	-9.02809E-01	2.07289E-02	0.00000E+00	2.07289E-02	0.00000E+00
5.23333E+00	8.03137E-01	0.00000E+00	0.00000E+00	-8.03137E-01	2.11806E-02	0.00000E+00	2.11806E-02	0.00000E+00
5.26667E+00	6.98432E-01	0.00000E+00	0.00000E+00	-6.98432E-01	2.15964E-02	0.00000E+00	2.15964E-02	0.00000E+00
5.30000E+00	5.92860E-01	0.00000E+00	0.00000E+00	-5.92860E-01	2.19663E-02	0.00000E+00	2.19663E-02	0.00000E+00
5.33333E+00	4.89798E-01	0.00000E+00	0.00000E+00	-4.89798E-01	2.22820E-02	0.00000E+00	2.22820E-02	0.00000E+00
5.36667E+00	3.91860E-01	0.00000E+00	0.00000E+00	-3.91860E-01	2.25377E-02	0.00000E+00	2.25377E-02	0.00000E+00
5.40000E+00	3.01089E-01	0.00000E+00	0.00000E+00	-3.01089E-01	2.27254E-02	0.00000E+00	2.27254E-02	0.00000E+00
5.43333E+00	2.18861E-01	0.00000E+00	0.00000E+00	-2.18861E-01	2.28428E-02	0.00000E+00	2.28428E-02	0.00000E+00
5.46667E+00	1.46041E-01	0.00000E+00	0.00000E+00	-1.46041E-01	2.28875E-02	0.00000E+00	2.28875E-02	0.00000E+00
5.50000E+00	8.30672E-02	0.00000E+00	0.00000E+00	-8.30672E-02	2.28596E-02	0.00000E+00	2.28596E-02	0.00000E+00
5.53333E+00	3.00019E-02	0.00000E+00	0.00000E+00	-3.00019E-02	2.27602E-02	0.00000E+00	2.27602E-02	0.00000E+00

5.56667E+00	1.34093E-02	0.00000E+00	0.00000E+00	1.34093E-02	2.25933E-02	0.00000E+00	2.25933E-02	0.00000E+00
5.60000E+00	4.76429E-02	0.00000E+00	0.00000E+00	4.76429E-02	2.23630E-02	0.00000E+00	2.23630E-02	0.00000E+00
5.63333E+00	7.33986E-02	0.00000E+00	0.00000E+00	7.33986E-02	2.20769E-02	0.00000E+00	2.20769E-02	0.00000E+00
5.66667E+00	9.15074E-02	0.00000E+00	0.00000E+00	9.15074E-02	2.17428E-02	0.00000E+00	2.17428E-02	0.00000E+00
5.70000E+00	1.02858E-01	0.00000E+00	0.00000E+00	1.02858E-01	2.13671E-02	0.00000E+00	2.13671E-02	0.00000E+00
5.73333E+00	1.08379E-01	0.00000E+00	0.00000E+00	1.08379E-01	2.09586E-02	0.00000E+00	2.09586E-02	0.00000E+00
5.76667E+00	1.09000E-01	0.00000E+00	0.00000E+00	1.09000E-01	2.05256E-02	0.00000E+00	2.05256E-02	0.00000E+00
5.80000E+00	1.05627E-01	0.00000E+00	0.00000E+00	1.05627E-01	2.00749E-02	0.00000E+00	2.00749E-02	0.00000E+00
5.83333E+00	9.91376E-02	0.00000E+00	0.00000E+00	9.91376E-02	1.96155E-02	0.00000E+00	1.96155E-02	0.00000E+00
5.86667E+00	9.03198E-02	0.00000E+00	0.00000E+00	9.03198E-02	1.91515E-02	0.00000E+00	1.91515E-02	0.00000E+00
5.90000E+00	7.98920E-02	0.00000E+00	0.00000E+00	7.98920E-02	1.86885E-02	0.00000E+00	1.86885E-02	0.00000E+00
5.93333E+00	6.84780E-02	0.00000E+00	0.00000E+00	6.84780E-02	1.82293E-02	0.00000E+00	1.82293E-02	0.00000E+00
5.96667E+00	5.66217E-02	0.00000E+00	0.00000E+00	5.66217E-02	1.77785E-02	0.00000E+00	1.77785E-02	0.00000E+00
6.00000E+00	4.47921E-02	0.00000E+00	0.00000E+00	4.47921E-02	1.73417E-02	0.00000E+00	1.73417E-02	0.00000E+00

1Boat 30 mph
Request Number 2004

Bullet Boat Forces

Force exerted on Marker 200100 by Marker 1002001

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	4.85967E+03	0.00000E+00	0.00000E+00	4.85967E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	4.83270E+03	0.00000E+00	0.00000E+00	4.83270E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	4.76482E+03	0.00000E+00	0.00000E+00	4.76482E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	4.67057E+03	0.00000E+00	0.00000E+00	4.67057E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	4.56149E+03	0.00000E+00	0.00000E+00	4.56149E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	4.44609E+03	0.00000E+00	0.00000E+00	4.44609E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	4.33041E+03	0.00000E+00	0.00000E+00	4.33041E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	4.22041E+03	0.00000E+00	0.00000E+00	4.22041E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	4.11984E+03	0.00000E+00	0.00000E+00	4.11984E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	4.03080E+03	0.00000E+00	0.00000E+00	4.03080E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	3.95456E+03	0.00000E+00	0.00000E+00	3.95456E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	3.89118E+03	0.00000E+00	0.00000E+00	3.89118E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	3.84045E+03	0.00000E+00	0.00000E+00	3.84045E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	3.80173E+03	0.00000E+00	0.00000E+00	3.80173E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	3.77408E+03	0.00000E+00	0.00000E+00	3.77408E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	3.75641E+03	0.00000E+00	0.00000E+00	3.75641E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	3.74753E+03	0.00000E+00	0.00000E+00	3.74753E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	3.74602E+03	0.00000E+00	0.00000E+00	3.74602E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	3.75055E+03	0.00000E+00	0.00000E+00	3.75055E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	3.75985E+03	0.00000E+00	0.00000E+00	3.75985E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	3.77274E+03	0.00000E+00	0.00000E+00	3.77274E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	3.78813E+03	0.00000E+00	0.00000E+00	3.78813E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	3.80509E+03	0.00000E+00	0.00000E+00	3.80509E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	3.82282E+03	0.00000E+00	0.00000E+00	3.82282E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	3.84064E+03	0.00000E+00	0.00000E+00	3.84064E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	3.85800E+03	0.00000E+00	0.00000E+00	3.85800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	3.87449E+03	0.00000E+00	0.00000E+00	3.87449E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	3.88979E+03	0.00000E+00	0.00000E+00	3.88979E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	3.90369E+03	0.00000E+00	0.00000E+00	3.90369E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	3.91609E+03	0.00000E+00	0.00000E+00	3.91609E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	3.92695E+03	0.00000E+00	0.00000E+00	3.92695E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	3.93706E+03	0.00000E+00	0.00000E+00	3.93706E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	3.94780E+03	0.00000E+00	0.00000E+00	3.94780E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1.10000E+00	3.96009E+03	0.00000E+00	0.00000E+00	3.96009E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	3.97386E+03	0.00000E+00	0.00000E+00	3.97386E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	3.98852E+03	0.00000E+00	0.00000E+00	3.98852E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	4.00339E+03	0.00000E+00	0.00000E+00	4.00339E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	4.01784E+03	0.00000E+00	0.00000E+00	4.01784E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	4.03130E+03	0.00000E+00	0.00000E+00	4.03130E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	4.04332E+03	0.00000E+00	0.00000E+00	4.04332E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	4.05347E+03	0.00000E+00	0.00000E+00	4.05347E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	4.06142E+03	0.00000E+00	0.00000E+00	4.06142E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	4.06690E+03	0.00000E+00	0.00000E+00	4.06690E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	4.06976E+03	0.00000E+00	0.00000E+00	4.06976E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	4.06996E+03	0.00000E+00	0.00000E+00	4.06996E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	4.06754E+03	0.00000E+00	0.00000E+00	4.06754E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	4.06262E+03	0.00000E+00	0.00000E+00	4.06262E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	4.05546E+03	0.00000E+00	0.00000E+00	4.05546E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	4.04638E+03	0.00000E+00	0.00000E+00	4.04638E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	4.03577E+03	0.00000E+00	0.00000E+00	4.03577E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	4.02406E+03	0.00000E+00	0.00000E+00	4.02406E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	4.01173E+03	0.00000E+00	0.00000E+00	4.01173E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	3.99927E+03	0.00000E+00	0.00000E+00	3.99927E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	3.98718E+03	0.00000E+00	0.00000E+00	3.98718E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	3.97591E+03	0.00000E+00	0.00000E+00	3.97591E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	3.96591E+03	0.00000E+00	0.00000E+00	3.96591E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	3.95755E+03	0.00000E+00	0.00000E+00	3.95755E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	3.95115E+03	0.00000E+00	0.00000E+00	3.95115E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	3.94695E+03	0.00000E+00	0.00000E+00	3.94695E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	3.94511E+03	0.00000E+00	0.00000E+00	3.94511E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	3.94569E+03	0.00000E+00	0.00000E+00	3.94569E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	3.94871E+03	0.00000E+00	0.00000E+00	3.94871E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	3.95408E+03	0.00000E+00	0.00000E+00	3.95408E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	3.96160E+03	0.00000E+00	0.00000E+00	3.96160E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	3.97103E+03	0.00000E+00	0.00000E+00	3.97103E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	3.98201E+03	0.00000E+00	0.00000E+00	3.98201E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	3.99418E+03	0.00000E+00	0.00000E+00	3.99418E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	4.00707E+03	0.00000E+00	0.00000E+00	4.00707E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	4.02024E+03	0.00000E+00	0.00000E+00	4.02024E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	4.03322E+03	0.00000E+00	0.00000E+00	4.03322E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	4.04554E+03	0.00000E+00	0.00000E+00	4.04554E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	4.05678E+03	0.00000E+00	0.00000E+00	4.05678E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	4.06651E+03	0.00000E+00	0.00000E+00	4.06651E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	4.07442E+03	0.00000E+00	0.00000E+00	4.07442E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	4.08025E+03	0.00000E+00	0.00000E+00	4.08025E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	4.08379E+03	0.00000E+00	0.00000E+00	4.08379E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	4.08497E+03	0.00000E+00	0.00000E+00	4.08497E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	4.08378E+03	0.00000E+00	0.00000E+00	4.08378E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	4.08034E+03	0.00000E+00	0.00000E+00	4.08034E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	4.07476E+03	0.00000E+00	0.00000E+00	4.07476E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	4.06731E+03	0.00000E+00	0.00000E+00	4.06731E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	4.05830E+03	0.00000E+00	0.00000E+00	4.05830E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	4.04812E+03	0.00000E+00	0.00000E+00	4.04812E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	4.03718E+03	0.00000E+00	0.00000E+00	4.03718E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	4.02592E+03	0.00000E+00	0.00000E+00	4.02592E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	4.01476E+03	0.00000E+00	0.00000E+00	4.01476E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	4.00416E+03	0.00000E+00	0.00000E+00	4.00416E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

2.90000E+00	3.99452E+03	0.00000E+00	0.00000E+00	3.99452E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	3.98622E+03	0.00000E+00	0.00000E+00	3.98622E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	3.97959E+03	0.00000E+00	0.00000E+00	3.97959E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	3.97487E+03	0.00000E+00	0.00000E+00	3.97487E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	3.97224E+03	0.00000E+00	0.00000E+00	3.97224E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	3.97180E+03	0.00000E+00	0.00000E+00	3.97180E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	3.97357E+03	0.00000E+00	0.00000E+00	3.97357E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	3.97500E+03	0.00000E+00	0.00000E+00	3.97500E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	3.92211E+03	0.00000E+00	0.00000E+00	3.92211E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	3.88075E+03	0.00000E+00	0.00000E+00	3.88075E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	3.86935E+03	0.00000E+00	0.00000E+00	3.86935E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	3.86635E+03	0.00000E+00	0.00000E+00	3.86635E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	3.86504E+03	0.00000E+00	0.00000E+00	3.86504E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	3.68653E+03	0.00000E+00	0.00000E+00	3.68653E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	2.98516E+03	0.00000E+00	0.00000E+00	2.98516E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	2.09933E+03	0.00000E+00	0.00000E+00	2.09933E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	1.41531E+03	0.00000E+00	0.00000E+00	1.41531E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	9.13754E+02	0.00000E+00	0.00000E+00	9.13754E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	5.50859E+02	0.00000E+00	0.00000E+00	5.50859E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	3.04987E+02	0.00000E+00	0.00000E+00	3.04987E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	1.46125E+02	0.00000E+00	0.00000E+00	1.46125E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	5.44974E+01	0.00000E+00	0.00000E+00	5.44974E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	1.22284E+01	0.00000E+00	0.00000E+00	1.22284E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	2.35169E+00	0.00000E+00	0.00000E+00	2.35169E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	1.18225E-01	0.00000E+00	0.00000E+00	1.18225E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	4.07458E-01	0.00000E+00	0.00000E+00	4.07458E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	2.20674E+00	0.00000E+00	0.00000E+00	2.20674E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	7.96062E+00	0.00000E+00	0.00000E+00	7.96062E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	3.67017E+01	0.00000E+00	0.00000E+00	3.67017E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	1.18786E+02	0.00000E+00	0.00000E+00	1.18786E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	2.81151E+02	0.00000E+00	0.00000E+00	2.81151E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	5.12933E+02	0.00000E+00	0.00000E+00	5.12933E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	8.00726E+02	0.00000E+00	0.00000E+00	8.00726E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	1.13220E+03	0.00000E+00	0.00000E+00	1.13220E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	1.49341E+03	0.00000E+00	0.00000E+00	1.49341E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	1.87855E+03	0.00000E+00	0.00000E+00	1.87855E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	2.27152E+03	0.00000E+00	0.00000E+00	2.27152E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	2.66277E+03	0.00000E+00	0.00000E+00	2.66277E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	3.04220E+03	0.00000E+00	0.00000E+00	3.04220E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	3.39808E+03	0.00000E+00	0.00000E+00	3.39808E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	3.72159E+03	0.00000E+00	0.00000E+00	3.72159E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	4.01010E+03	0.00000E+00	0.00000E+00	4.01010E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	4.25956E+03	0.00000E+00	0.00000E+00	4.25956E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	4.46628E+03	0.00000E+00	0.00000E+00	4.46628E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	4.62961E+03	0.00000E+00	0.00000E+00	4.62961E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	4.75164E+03	0.00000E+00	0.00000E+00	4.75164E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	4.83560E+03	0.00000E+00	0.00000E+00	4.83560E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	4.88556E+03	0.00000E+00	0.00000E+00	4.88556E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	4.90612E+03	0.00000E+00	0.00000E+00	4.90612E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	4.90210E+03	0.00000E+00	0.00000E+00	4.90210E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

4.70000E+00	4.87821E+03	0.00000E+00	0.00000E+00	4.87821E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	4.83899E+03	0.00000E+00	0.00000E+00	4.83899E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	4.78863E+03	0.00000E+00	0.00000E+00	4.78863E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	4.73085E+03	0.00000E+00	0.00000E+00	4.73085E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	4.66902E+03	0.00000E+00	0.00000E+00	4.66902E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	4.60572E+03	0.00000E+00	0.00000E+00	4.60572E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	4.54313E+03	0.00000E+00	0.00000E+00	4.54313E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	4.48298E+03	0.00000E+00	0.00000E+00	4.48298E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	4.42657E+03	0.00000E+00	0.00000E+00	4.42657E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	4.37479E+03	0.00000E+00	0.00000E+00	4.37479E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	4.32823E+03	0.00000E+00	0.00000E+00	4.32823E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	4.28718E+03	0.00000E+00	0.00000E+00	4.28718E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	4.25171E+03	0.00000E+00	0.00000E+00	4.25171E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	4.22171E+03	0.00000E+00	0.00000E+00	4.22171E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	4.19694E+03	0.00000E+00	0.00000E+00	4.19694E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	4.17703E+03	0.00000E+00	0.00000E+00	4.17703E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	4.16155E+03	0.00000E+00	0.00000E+00	4.16155E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	4.15003E+03	0.00000E+00	0.00000E+00	4.15003E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	4.14195E+03	0.00000E+00	0.00000E+00	4.14195E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	4.13682E+03	0.00000E+00	0.00000E+00	4.13682E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	4.13413E+03	0.00000E+00	0.00000E+00	4.13413E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	4.13341E+03	0.00000E+00	0.00000E+00	4.13341E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	4.13421E+03	0.00000E+00	0.00000E+00	4.13421E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	4.13612E+03	0.00000E+00	0.00000E+00	4.13612E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	4.13880E+03	0.00000E+00	0.00000E+00	4.13880E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	4.14191E+03	0.00000E+00	0.00000E+00	4.14191E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	4.14520E+03	0.00000E+00	0.00000E+00	4.14520E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	4.14843E+03	0.00000E+00	0.00000E+00	4.14843E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	4.15142E+03	0.00000E+00	0.00000E+00	4.15142E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	4.15406E+03	0.00000E+00	0.00000E+00	4.15406E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	4.15623E+03	0.00000E+00	0.00000E+00	4.15623E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	4.15787E+03	0.00000E+00	0.00000E+00	4.15787E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	4.15895E+03	0.00000E+00	0.00000E+00	4.15895E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	4.15945E+03	0.00000E+00	0.00000E+00	4.15945E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	4.15940E+03	0.00000E+00	0.00000E+00	4.15940E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	4.15881E+03	0.00000E+00	0.00000E+00	4.15881E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	4.15773E+03	0.00000E+00	0.00000E+00	4.15773E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	4.15621E+03	0.00000E+00	0.00000E+00	4.15621E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	4.15430E+03	0.00000E+00	0.00000E+00	4.15430E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	4.15206E+03	0.00000E+00	0.00000E+00	4.15206E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 20881

Displacement of Marker 2088 relative to Marker 100

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	1.80000E+01	1.80000E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	1.65330E+01	1.65327E+01	0.00000E+00	9.93490E-02	0.00000E+00	-4.79338E-02	0.00000E+00
6.66667E-02	1.50685E+01	1.50651E+01	0.00000E+00	3.24669E-01	0.00000E+00	-1.55993E-01	0.00000E+00
1.00000E-01	1.36114E+01	1.35977E+01	0.00000E+00	6.11573E-01	0.00000E+00	-2.92789E-01	0.00000E+00
1.33333E-01	1.21660E+01	1.21310E+01	0.00000E+00	9.22106E-01	0.00000E+00	-4.40091E-01	0.00000E+00
1.66667E-01	1.07364E+01	1.06650E+01	0.00000E+00	1.23603E+00	0.00000E+00	-5.88407E-01	0.00000E+00
2.00000E-01	9.32835E+00	9.19981E+00	0.00000E+00	1.54328E+00	0.00000E+00	-7.33209E-01	0.00000E+00
2.33333E-01	7.95009E+00	7.73520E+00	0.00000E+00	1.83593E+00	0.00000E+00	-8.71037E-01	0.00000E+00
2.66667E-01	6.61702E+00	6.27109E+00	0.00000E+00	2.11148E+00	0.00000E+00	-1.00100E+00	0.00000E+00

3.00000E-01	5.35983E+00	4.80737E+00	0.00000E+00	2.37002E+00	0.00000E+00	-1.12335E+00	0.00000E+00
3.33333E-01	4.24338E+00	3.34396E+00	0.00000E+00	2.61233E+00	0.00000E+00	-1.23864E+00	0.00000E+00
3.66667E-01	3.40607E+00	1.88079E+00	0.00000E+00	2.83970E+00	0.00000E+00	-1.34755E+00	0.00000E+00
4.00000E-01	3.08176E+00	4.17823E-01	0.00000E+00	3.05330E+00	0.00000E+00	-1.45068E+00	0.00000E+00
4.33333E-01	3.41799E+00	-1.04499E+00	0.00000E+00	3.25433E+00	0.00000E+00	-1.54857E+00	0.00000E+00
4.66667E-01	4.26026E+00	-2.50767E+00	0.00000E+00	3.44404E+00	0.00000E+00	-1.64181E+00	0.00000E+00
5.00000E-01	5.37530E+00	-3.97025E+00	0.00000E+00	3.62366E+00	0.00000E+00	-1.73090E+00	0.00000E+00
5.33333E-01	6.62656E+00	-5.43274E+00	0.00000E+00	3.79430E+00	0.00000E+00	-1.81631E+00	0.00000E+00
5.66667E-01	7.94999E+00	-6.89514E+00	0.00000E+00	3.95720E+00	0.00000E+00	-1.89852E+00	0.00000E+00
6.00000E-01	9.31489E+00	-8.35746E+00	0.00000E+00	4.11339E+00	0.00000E+00	-1.97793E+00	0.00000E+00
6.33333E-01	1.07054E+01	-9.81971E+00	0.00000E+00	4.26373E+00	0.00000E+00	-2.05485E+00	0.00000E+00
6.66667E-01	1.21128E+01	-1.12819E+01	0.00000E+00	4.40896E+00	0.00000E+00	-2.12954E+00	0.00000E+00
7.00000E-01	1.35318E+01	-1.27440E+01	0.00000E+00	4.54973E+00	0.00000E+00	-2.20222E+00	0.00000E+00
7.33333E-01	1.49591E+01	-1.42060E+01	0.00000E+00	4.68654E+00	0.00000E+00	-2.27306E+00	0.00000E+00
7.66667E-01	1.63926E+01	-1.56680E+01	0.00000E+00	4.81982E+00	0.00000E+00	-2.34219E+00	0.00000E+00
8.00000E-01	1.78308E+01	-1.71300E+01	0.00000E+00	4.94992E+00	0.00000E+00	-2.40972E+00	0.00000E+00
8.33333E-01	1.92726E+01	-1.85919E+01	0.00000E+00	5.07709E+00	0.00000E+00	-2.47573E+00	0.00000E+00
8.66667E-01	2.07173E+01	-2.00537E+01	0.00000E+00	5.20152E+00	0.00000E+00	-2.54026E+00	0.00000E+00
9.00000E-01	2.21643E+01	-2.15155E+01	0.00000E+00	5.32337E+00	0.00000E+00	-2.60337E+00	0.00000E+00
9.33333E-01	2.36131E+01	-2.29773E+01	0.00000E+00	5.44271E+00	0.00000E+00	-2.66508E+00	0.00000E+00
9.66667E-01	2.50635E+01	-2.44391E+01	0.00000E+00	5.55961E+00	0.00000E+00	-2.72540E+00	0.00000E+00
1.00000E+00	2.65151E+01	-2.59008E+01	0.00000E+00	5.67408E+00	0.00000E+00	-2.78434E+00	0.00000E+00
1.03333E+00	2.79677E+01	-2.73626E+01	0.00000E+00	5.78600E+00	0.00000E+00	-2.84191E+00	0.00000E+00
1.06667E+00	2.94210E+01	-2.88244E+01	0.00000E+00	5.89512E+00	0.00000E+00	-2.89813E+00	0.00000E+00
1.10000E+00	3.08750E+01	-3.02861E+01	0.00000E+00	6.00132E+00	0.00000E+00	-2.95304E+00	0.00000E+00
1.13333E+00	3.23295E+01	-3.17479E+01	0.00000E+00	6.10474E+00	0.00000E+00	-3.00668E+00	0.00000E+00
1.16667E+00	3.37845E+01	-3.32097E+01	0.00000E+00	6.20561E+00	0.00000E+00	-3.05913E+00	0.00000E+00
1.20000E+00	3.52400E+01	-3.46715E+01	0.00000E+00	6.30419E+00	0.00000E+00	-3.11044E+00	0.00000E+00
1.23333E+00	3.66959E+01	-3.61333E+01	0.00000E+00	6.40071E+00	0.00000E+00	-3.16067E+00	0.00000E+00
1.26667E+00	3.81521E+01	-3.75951E+01	0.00000E+00	6.49535E+00	0.00000E+00	-3.20984E+00	0.00000E+00
1.30000E+00	3.96088E+01	-3.90570E+01	0.00000E+00	6.58824E+00	0.00000E+00	-3.25799E+00	0.00000E+00
1.33333E+00	4.10657E+01	-4.05189E+01	0.00000E+00	6.67948E+00	0.00000E+00	-3.30512E+00	0.00000E+00
1.36667E+00	4.25230E+01	-4.19808E+01	0.00000E+00	6.76913E+00	0.00000E+00	-3.35123E+00	0.00000E+00
1.40000E+00	4.39806E+01	-4.34427E+01	0.00000E+00	6.85721E+00	0.00000E+00	-3.39630E+00	0.00000E+00
1.43333E+00	4.54384E+01	-4.49047E+01	0.00000E+00	6.94371E+00	0.00000E+00	-3.44030E+00	0.00000E+00
1.46667E+00	4.68964E+01	-4.63667E+01	0.00000E+00	7.02857E+00	0.00000E+00	-3.48321E+00	0.00000E+00
1.50000E+00	4.83547E+01	-4.78288E+01	0.00000E+00	7.11175E+00	0.00000E+00	-3.52501E+00	0.00000E+00
1.53333E+00	4.98131E+01	-4.92910E+01	0.00000E+00	7.19316E+00	0.00000E+00	-3.56566E+00	0.00000E+00
1.56667E+00	5.12716E+01	-5.07532E+01	0.00000E+00	7.27269E+00	0.00000E+00	-3.60513E+00	0.00000E+00
1.60000E+00	5.27303E+01	-5.22155E+01	0.00000E+00	7.35026E+00	0.00000E+00	-3.64341E+00	0.00000E+00
1.63333E+00	5.41891E+01	-5.36779E+01	0.00000E+00	7.42574E+00	0.00000E+00	-3.68048E+00	0.00000E+00
1.66667E+00	5.56480E+01	-5.51404E+01	0.00000E+00	7.49906E+00	0.00000E+00	-3.71634E+00	0.00000E+00
1.70000E+00	5.71070E+01	-5.66030E+01	0.00000E+00	7.57011E+00	0.00000E+00	-3.75099E+00	0.00000E+00
1.73333E+00	5.85660E+01	-5.80657E+01	0.00000E+00	7.63884E+00	0.00000E+00	-3.78445E+00	0.00000E+00
1.76667E+00	6.00251E+01	-5.95285E+01	0.00000E+00	7.70519E+00	0.00000E+00	-3.81673E+00	0.00000E+00
1.80000E+00	6.14843E+01	-6.09914E+01	0.00000E+00	7.76913E+00	0.00000E+00	-3.84789E+00	0.00000E+00
1.83333E+00	6.29434E+01	-6.24544E+01	0.00000E+00	7.83067E+00	0.00000E+00	-3.87795E+00	0.00000E+00
1.86667E+00	6.44026E+01	-6.39175E+01	0.00000E+00	7.88984E+00	0.00000E+00	-3.90698E+00	0.00000E+00
1.90000E+00	6.58619E+01	-6.53807E+01	0.00000E+00	7.94668E+00	0.00000E+00	-3.93504E+00	0.00000E+00
1.93333E+00	6.73212E+01	-6.68440E+01	0.00000E+00	8.00128E+00	0.00000E+00	-3.96218E+00	0.00000E+00
1.96667E+00	6.87805E+01	-6.83073E+01	0.00000E+00	8.05373E+00	0.00000E+00	-3.98848E+00	0.00000E+00
2.00000E+00	7.02399E+01	-6.97708E+01	0.00000E+00	8.10413E+00	0.00000E+00	-4.01400E+00	0.00000E+00
2.03333E+00	7.16993E+01	-7.12343E+01	0.00000E+00	8.15258E+00	0.00000E+00	-4.03877E+00	0.00000E+00
2.06667E+00	7.31588E+01	-7.26978E+01	0.00000E+00	8.19920E+00	0.00000E+00	-4.06287E+00	0.00000E+00

2.10000E+00	7.46183E+01	-7.41615E+01	0.00000E+00	8.24418E+00	0.00000E+00	-4.08636E+00	0.00000E+00
2.13333E+00	7.60779E+01	-7.56251E+01	0.00000E+00	8.28771E+00	0.00000E+00	-4.10932E+00	0.00000E+00
2.16667E+00	7.75376E+01	-7.70889E+01	0.00000E+00	8.33001E+00	0.00000E+00	-4.13181E+00	0.00000E+00
2.20000E+00	7.89974E+01	-7.85526E+01	0.00000E+00	8.37126E+00	0.00000E+00	-4.15389E+00	0.00000E+00
2.23333E+00	8.04573E+01	-8.00164E+01	0.00000E+00	8.41164E+00	0.00000E+00	-4.17561E+00	0.00000E+00
2.26667E+00	8.19174E+01	-8.14802E+01	0.00000E+00	8.45134E+00	0.00000E+00	-4.19701E+00	0.00000E+00
2.30000E+00	8.33775E+01	-8.29441E+01	0.00000E+00	8.49049E+00	0.00000E+00	-4.21812E+00	0.00000E+00
2.33333E+00	8.48378E+01	-8.44079E+01	0.00000E+00	8.52922E+00	0.00000E+00	-4.23895E+00	0.00000E+00
2.36667E+00	8.62982E+01	-8.58718E+01	0.00000E+00	8.56762E+00	0.00000E+00	-4.25950E+00	0.00000E+00
2.40000E+00	8.77587E+01	-8.73357E+01	0.00000E+00	8.60576E+00	0.00000E+00	-4.27977E+00	0.00000E+00
2.43333E+00	8.92193E+01	-8.87997E+01	0.00000E+00	8.64368E+00	0.00000E+00	-4.29973E+00	0.00000E+00
2.46667E+00	9.06801E+01	-9.02636E+01	0.00000E+00	8.68136E+00	0.00000E+00	-4.31936E+00	0.00000E+00
2.50000E+00	9.21411E+01	-9.17276E+01	0.00000E+00	8.71878E+00	0.00000E+00	-4.33863E+00	0.00000E+00
2.53333E+00	9.36021E+01	-9.31917E+01	0.00000E+00	8.75587E+00	0.00000E+00	-4.35749E+00	0.00000E+00
2.56667E+00	9.50633E+01	-9.46558E+01	0.00000E+00	8.79256E+00	0.00000E+00	-4.37590E+00	0.00000E+00
2.60000E+00	9.65245E+01	-9.61199E+01	0.00000E+00	8.82870E+00	0.00000E+00	-4.39381E+00	0.00000E+00
2.63333E+00	9.79859E+01	-9.75841E+01	0.00000E+00	8.86425E+00	0.00000E+00	-4.41119E+00	0.00000E+00
2.66667E+00	9.94474E+01	-9.90484E+01	0.00000E+00	8.89904E+00	0.00000E+00	-4.42800E+00	0.00000E+00
2.70000E+00	1.00909E+02	-1.00513E+02	0.00000E+00	8.93295E+00	0.00000E+00	-4.44420E+00	0.00000E+00
2.73333E+00	1.02371E+02	-1.01977E+02	0.00000E+00	8.96585E+00	0.00000E+00	-4.45977E+00	0.00000E+00
2.76667E+00	1.03832E+02	-1.03442E+02	0.00000E+00	8.99762E+00	0.00000E+00	-4.47469E+00	0.00000E+00
2.80000E+00	1.05294E+02	-1.04906E+02	0.00000E+00	9.02817E+00	0.00000E+00	-4.48895E+00	0.00000E+00
2.83333E+00	1.06756E+02	-1.06371E+02	0.00000E+00	9.05741E+00	0.00000E+00	-4.50257E+00	0.00000E+00
2.86667E+00	1.08218E+02	-1.07836E+02	0.00000E+00	9.08526E+00	0.00000E+00	-4.51554E+00	0.00000E+00
2.90000E+00	1.09680E+02	-1.09301E+02	0.00000E+00	9.11170E+00	0.00000E+00	-4.52789E+00	0.00000E+00
2.93333E+00	1.11142E+02	-1.10766E+02	0.00000E+00	9.13670E+00	0.00000E+00	-4.53966E+00	0.00000E+00
2.96667E+00	1.12604E+02	-1.12231E+02	0.00000E+00	9.16028E+00	0.00000E+00	-4.55088E+00	0.00000E+00
3.00000E+00	1.14066E+02	-1.13696E+02	0.00000E+00	9.18249E+00	0.00000E+00	-4.56161E+00	0.00000E+00
3.03333E+00	1.15528E+02	-1.15161E+02	0.00000E+00	9.20339E+00	0.00000E+00	-4.57188E+00	0.00000E+00
3.06667E+00	1.16990E+02	-1.16626E+02	0.00000E+00	9.22306E+00	0.00000E+00	-4.58178E+00	0.00000E+00
3.10000E+00	1.18453E+02	-1.18091E+02	0.00000E+00	9.24164E+00	0.00000E+00	-4.59134E+00	0.00000E+00
3.13333E+00	1.19914E+02	-1.19555E+02	0.00000E+00	9.27535E+00	0.00000E+00	-4.60852E+00	0.00000E+00
3.16667E+00	1.21360E+02	-1.20978E+02	0.00000E+00	9.62166E+00	0.00000E+00	-4.77788E+00	0.00000E+00
3.20000E+00	1.22803E+02	-1.22412E+02	0.00000E+00	9.79483E+00	0.00000E+00	-4.86097E+00	0.00000E+00
3.23333E+00	1.24247E+02	-1.23863E+02	0.00000E+00	9.76789E+00	0.00000E+00	-4.84616E+00	0.00000E+00
3.26667E+00	1.25689E+02	-1.25310E+02	0.00000E+00	9.74298E+00	0.00000E+00	-4.83327E+00	0.00000E+00
3.30000E+00	1.27125E+02	-1.26750E+02	0.00000E+00	9.75767E+00	0.00000E+00	-4.84055E+00	0.00000E+00
3.33333E+00	1.28514E+02	-1.28055E+02	0.00000E+00	1.08446E+01	0.00000E+00	-5.37012E+00	0.00000E+00
3.36667E+00	1.29785E+02	-1.28940E+02	0.00000E+00	1.47916E+01	0.00000E+00	-7.27837E+00	0.00000E+00
3.40000E+00	1.30981E+02	-1.29441E+02	0.00000E+00	2.00228E+01	0.00000E+00	-9.78089E+00	0.00000E+00
3.43333E+00	1.32168E+02	-1.30048E+02	0.00000E+00	2.35800E+01	0.00000E+00	-1.14361E+01	0.00000E+00
3.46667E+00	1.33366E+02	-1.30914E+02	0.00000E+00	2.54538E+01	0.00000E+00	-1.22519E+01	0.00000E+00
3.50000E+00	1.34567E+02	-1.31946E+02	0.00000E+00	2.64281E+01	0.00000E+00	-1.26246E+01	0.00000E+00
3.53333E+00	1.35765E+02	-1.33065E+02	0.00000E+00	2.69386E+01	0.00000E+00	-1.27760E+01	0.00000E+00
3.56667E+00	1.36958E+02	-1.34240E+02	0.00000E+00	2.71459E+01	0.00000E+00	-1.27851E+01	0.00000E+00
3.60000E+00	1.38144E+02	-1.35456E+02	0.00000E+00	2.71218E+01	0.00000E+00	-1.26854E+01	0.00000E+00
3.63333E+00	1.39326E+02	-1.36699E+02	0.00000E+00	2.69292E+01	0.00000E+00	-1.25072E+01	0.00000E+00
3.66667E+00	1.40501E+02	-1.37930E+02	0.00000E+00	2.67534E+01	0.00000E+00	-1.23501E+01	0.00000E+00
3.70000E+00	1.41663E+02	-1.39127E+02	0.00000E+00	2.66891E+01	0.00000E+00	-1.22678E+01	0.00000E+00
3.73333E+00	1.42814E+02	-1.40301E+02	0.00000E+00	2.66769E+01	0.00000E+00	-1.22306E+01	0.00000E+00
3.76667E+00	1.43954E+02	-1.41463E+02	0.00000E+00	2.66654E+01	0.00000E+00	-1.22122E+01	0.00000E+00
3.80000E+00	1.45084E+02	-1.42618E+02	0.00000E+00	2.66355E+01	0.00000E+00	-1.22026E+01	0.00000E+00
3.83333E+00	1.46205E+02	-1.43772E+02	0.00000E+00	2.65617E+01	0.00000E+00	-1.21882E+01	0.00000E+00
3.86667E+00	1.47323E+02	-1.44956E+02	0.00000E+00	2.63046E+01	0.00000E+00	-1.20921E+01	0.00000E+00

3.90000E+00	1.48446E+02	-1.46167E+02	0.00000E+00	2.59132E+01	0.00000E+00	-1.19369E+01	0.00000E+00
3.93333E+00	1.49565E+02	-1.47360E+02	0.00000E+00	2.55878E+01	0.00000E+00	-1.18305E+01	0.00000E+00
3.96667E+00	1.50677E+02	-1.48531E+02	0.00000E+00	2.53344E+01	0.00000E+00	-1.17790E+01	0.00000E+00
4.00000E+00	1.51782E+02	-1.49694E+02	0.00000E+00	2.50867E+01	0.00000E+00	-1.17479E+01	0.00000E+00
4.03333E+00	1.52885E+02	-1.50854E+02	0.00000E+00	2.48412E+01	0.00000E+00	-1.17260E+01	0.00000E+00
4.06667E+00	1.53991E+02	-1.52014E+02	0.00000E+00	2.45939E+01	0.00000E+00	-1.17003E+01	0.00000E+00
4.10000E+00	1.55101E+02	-1.53179E+02	0.00000E+00	2.43380E+01	0.00000E+00	-1.16646E+01	0.00000E+00
4.13333E+00	1.56214E+02	-1.54349E+02	0.00000E+00	2.40678E+01	0.00000E+00	-1.16160E+01	0.00000E+00
4.16667E+00	1.57332E+02	-1.55524E+02	0.00000E+00	2.37816E+01	0.00000E+00	-1.15532E+01	0.00000E+00
4.20000E+00	1.58454E+02	-1.56704E+02	0.00000E+00	2.34805E+01	0.00000E+00	-1.14767E+01	0.00000E+00
4.23333E+00	1.59580E+02	-1.57889E+02	0.00000E+00	2.31671E+01	0.00000E+00	-1.13876E+01	0.00000E+00
4.26667E+00	1.60710E+02	-1.59078E+02	0.00000E+00	2.28454E+01	0.00000E+00	-1.12878E+01	0.00000E+00
4.30000E+00	1.61844E+02	-1.60269E+02	0.00000E+00	2.25201E+01	0.00000E+00	-1.11796E+01	0.00000E+00
4.33333E+00	1.62981E+02	-1.61462E+02	0.00000E+00	2.21960E+01	0.00000E+00	-1.10653E+01	0.00000E+00
4.36667E+00	1.64121E+02	-1.62657E+02	0.00000E+00	2.18777E+01	0.00000E+00	-1.09473E+01	0.00000E+00
4.40000E+00	1.65265E+02	-1.63851E+02	0.00000E+00	2.15680E+01	0.00000E+00	-1.08272E+01	0.00000E+00
4.43333E+00	1.66410E+02	-1.65045E+02	0.00000E+00	2.12709E+01	0.00000E+00	-1.07071E+01	0.00000E+00
4.46667E+00	1.67558E+02	-1.66238E+02	0.00000E+00	2.09888E+01	0.00000E+00	-1.05886E+01	0.00000E+00
4.50000E+00	1.68707E+02	-1.67430E+02	0.00000E+00	2.07224E+01	0.00000E+00	-1.04725E+01	0.00000E+00
4.53333E+00	1.69858E+02	-1.68620E+02	0.00000E+00	2.04714E+01	0.00000E+00	-1.03592E+01	0.00000E+00
4.56667E+00	1.71010E+02	-1.69809E+02	0.00000E+00	2.02351E+01	0.00000E+00	-1.02488E+01	0.00000E+00
4.60000E+00	1.72163E+02	-1.70996E+02	0.00000E+00	2.00123E+01	0.00000E+00	-1.01413E+01	0.00000E+00
4.63333E+00	1.73317E+02	-1.72182E+02	0.00000E+00	1.98016E+01	0.00000E+00	-1.00366E+01	0.00000E+00
4.66667E+00	1.74472E+02	-1.73367E+02	0.00000E+00	1.96012E+01	0.00000E+00	-9.93443E+00	0.00000E+00
4.70000E+00	1.75627E+02	-1.74551E+02	0.00000E+00	1.94097E+01	0.00000E+00	-9.83448E+00	0.00000E+00
4.73333E+00	1.76782E+02	-1.75734E+02	0.00000E+00	1.92253E+01	0.00000E+00	-9.73648E+00	0.00000E+00
4.76667E+00	1.77938E+02	-1.76916E+02	0.00000E+00	1.90468E+01	0.00000E+00	-9.64022E+00	0.00000E+00
4.80000E+00	1.79094E+02	-1.78097E+02	0.00000E+00	1.88729E+01	0.00000E+00	-9.54549E+00	0.00000E+00
4.83333E+00	1.80250E+02	-1.79277E+02	0.00000E+00	1.87027E+01	0.00000E+00	-9.45216E+00	0.00000E+00
4.86667E+00	1.81406E+02	-1.80456E+02	0.00000E+00	1.85353E+01	0.00000E+00	-9.36013E+00	0.00000E+00
4.90000E+00	1.82562E+02	-1.81635E+02	0.00000E+00	1.83701E+01	0.00000E+00	-9.26932E+00	0.00000E+00
4.93333E+00	1.83718E+02	-1.82814E+02	0.00000E+00	1.82068E+01	0.00000E+00	-9.17968E+00	0.00000E+00
4.96667E+00	1.84874E+02	-1.83991E+02	0.00000E+00	1.80448E+01	0.00000E+00	-9.09120E+00	0.00000E+00
5.00000E+00	1.86030E+02	-1.85168E+02	0.00000E+00	1.78840E+01	0.00000E+00	-9.00387E+00	0.00000E+00
5.03333E+00	1.87186E+02	-1.86345E+02	0.00000E+00	1.77243E+01	0.00000E+00	-8.91769E+00	0.00000E+00
5.06667E+00	1.88341E+02	-1.87520E+02	0.00000E+00	1.75657E+01	0.00000E+00	-8.83269E+00	0.00000E+00
5.10000E+00	1.89497E+02	-1.88696E+02	0.00000E+00	1.74082E+01	0.00000E+00	-8.74889E+00	0.00000E+00
5.13333E+00	1.90652E+02	-1.89870E+02	0.00000E+00	1.72518E+01	0.00000E+00	-8.66631E+00	0.00000E+00
5.16667E+00	1.91808E+02	-1.91044E+02	0.00000E+00	1.70967E+01	0.00000E+00	-8.58500E+00	0.00000E+00
5.20000E+00	1.92963E+02	-1.92218E+02	0.00000E+00	1.69430E+01	0.00000E+00	-8.50497E+00	0.00000E+00
5.23333E+00	1.94118E+02	-1.93391E+02	0.00000E+00	1.67909E+01	0.00000E+00	-8.42626E+00	0.00000E+00
5.26667E+00	1.95273E+02	-1.94563E+02	0.00000E+00	1.66405E+01	0.00000E+00	-8.34891E+00	0.00000E+00
5.30000E+00	1.96428E+02	-1.95734E+02	0.00000E+00	1.64921E+01	0.00000E+00	-8.27292E+00	0.00000E+00
5.33333E+00	1.97583E+02	-1.96906E+02	0.00000E+00	1.63458E+01	0.00000E+00	-8.19834E+00	0.00000E+00
5.36667E+00	1.98738E+02	-1.98076E+02	0.00000E+00	1.62017E+01	0.00000E+00	-8.12517E+00	0.00000E+00
5.40000E+00	1.99892E+02	-1.99246E+02	0.00000E+00	1.60600E+01	0.00000E+00	-8.05344E+00	0.00000E+00
5.43333E+00	2.01047E+02	-2.00415E+02	0.00000E+00	1.59208E+01	0.00000E+00	-7.98315E+00	0.00000E+00
5.46667E+00	2.02201E+02	-2.01584E+02	0.00000E+00	1.57842E+01	0.00000E+00	-7.91432E+00	0.00000E+00
5.50000E+00	2.03355E+02	-2.02752E+02	0.00000E+00	1.56504E+01	0.00000E+00	-7.84694E+00	0.00000E+00
5.53333E+00	2.04510E+02	-2.03920E+02	0.00000E+00	1.55193E+01	0.00000E+00	-7.78102E+00	0.00000E+00
5.56667E+00	2.05664E+02	-2.05087E+02	0.00000E+00	1.53911E+01	0.00000E+00	-7.71655E+00	0.00000E+00
5.60000E+00	2.06818E+02	-2.06254E+02	0.00000E+00	1.52657E+01	0.00000E+00	-7.65351E+00	0.00000E+00
5.63333E+00	2.07972E+02	-2.07420E+02	0.00000E+00	1.51432E+01	0.00000E+00	-7.59190E+00	0.00000E+00
5.66667E+00	2.09126E+02	-2.08586E+02	0.00000E+00	1.50235E+01	0.00000E+00	-7.53170E+00	0.00000E+00

5.70000E+00	2.10280E+02	-2.09751E+02	0.00000E+00	1.49067E+01	0.00000E+00	-7.47287E+00	0.00000E+00
5.73333E+00	2.11434E+02	-2.10916E+02	0.00000E+00	1.47926E+01	0.00000E+00	-7.41541E+00	0.00000E+00
5.76667E+00	2.12588E+02	-2.12080E+02	0.00000E+00	1.46814E+01	0.00000E+00	-7.35929E+00	0.00000E+00
5.80000E+00	2.13742E+02	-2.13244E+02	0.00000E+00	1.45728E+01	0.00000E+00	-7.30446E+00	0.00000E+00
5.83333E+00	2.14895E+02	-2.14408E+02	0.00000E+00	1.44669E+01	0.00000E+00	-7.25092E+00	0.00000E+00
5.86667E+00	2.16049E+02	-2.15571E+02	0.00000E+00	1.43636E+01	0.00000E+00	-7.19863E+00	0.00000E+00
5.90000E+00	2.17202E+02	-2.16734E+02	0.00000E+00	1.42628E+01	0.00000E+00	-7.14755E+00	0.00000E+00
5.93333E+00	2.18356E+02	-2.17896E+02	0.00000E+00	1.41644E+01	0.00000E+00	-7.09767E+00	0.00000E+00
5.96667E+00	2.19509E+02	-2.19058E+02	0.00000E+00	1.40684E+01	0.00000E+00	-7.04894E+00	0.00000E+00
6.00000E+00	2.20663E+02	-2.20220E+02	0.00000E+00	1.39747E+01	0.00000E+00	-7.00135E+00	0.00000E+00

1Boat 30 mph
Request Number 2103

Force exerted on Marker 200100 by Marker 1002103

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	9.78877E+02	0.00000E+00	0.00000E+00	9.78877E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	9.77597E+02	0.00000E+00	0.00000E+00	9.77597E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	9.74585E+02	0.00000E+00	0.00000E+00	9.74585E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	9.70635E+02	0.00000E+00	0.00000E+00	9.70635E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	9.66262E+02	0.00000E+00	0.00000E+00	9.66262E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	9.58393E+02	0.00000E+00	0.00000E+00	9.58393E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	9.50565E+02	0.00000E+00	0.00000E+00	9.50565E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	9.43194E+02	0.00000E+00	0.00000E+00	9.43194E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	9.36409E+02	0.00000E+00	0.00000E+00	9.36409E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	9.30258E+02	0.00000E+00	0.00000E+00	9.30258E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	9.24753E+02	0.00000E+00	0.00000E+00	9.24753E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	9.19868E+02	0.00000E+00	0.00000E+00	9.19868E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	9.15573E+02	0.00000E+00	0.00000E+00	9.15573E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	9.11824E+02	0.00000E+00	0.00000E+00	9.11824E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	9.08567E+02	0.00000E+00	0.00000E+00	9.08567E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	9.05754E+02	0.00000E+00	0.00000E+00	9.05754E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	9.03325E+02	0.00000E+00	0.00000E+00	9.03325E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	9.01223E+02	0.00000E+00	0.00000E+00	9.01223E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	8.99392E+02	0.00000E+00	0.00000E+00	8.99392E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	8.97780E+02	0.00000E+00	0.00000E+00	8.97780E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	8.96344E+02	0.00000E+00	0.00000E+00	8.96344E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	8.95041E+02	0.00000E+00	0.00000E+00	8.95041E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	8.93838E+02	0.00000E+00	0.00000E+00	8.93838E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	8.92706E+02	0.00000E+00	0.00000E+00	8.92706E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	8.91619E+02	0.00000E+00	0.00000E+00	8.91619E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	8.90559E+02	0.00000E+00	0.00000E+00	8.90559E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	8.89511E+02	0.00000E+00	0.00000E+00	8.89511E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	8.88464E+02	0.00000E+00	0.00000E+00	8.88464E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	8.87411E+02	0.00000E+00	0.00000E+00	8.87411E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	8.86349E+02	0.00000E+00	0.00000E+00	8.86349E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	8.85276E+02	0.00000E+00	0.00000E+00	8.85276E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	8.84216E+02	0.00000E+00	0.00000E+00	8.84216E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	8.83211E+02	0.00000E+00	0.00000E+00	8.83211E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	8.82287E+02	0.00000E+00	0.00000E+00	8.82287E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	8.81441E+02	0.00000E+00	0.00000E+00	8.81441E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	8.80653E+02	0.00000E+00	0.00000E+00	8.80653E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	8.79899E+02	0.00000E+00	0.00000E+00	8.79899E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	8.79160E+02	0.00000E+00	0.00000E+00	8.79160E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	8.78418E+02	0.00000E+00	0.00000E+00	8.78418E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1.30000E+00	8.77659E+02	0.00000E+00	0.00000E+00	8.77659E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	8.76868E+02	0.00000E+00	0.00000E+00	8.76868E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	8.76037E+02	0.00000E+00	0.00000E+00	8.76037E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	8.75158E+02	0.00000E+00	0.00000E+00	8.75158E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	8.74227E+02	0.00000E+00	0.00000E+00	8.74227E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	8.73243E+02	0.00000E+00	0.00000E+00	8.73243E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	8.72209E+02	0.00000E+00	0.00000E+00	8.72209E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	8.71130E+02	0.00000E+00	0.00000E+00	8.71130E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	8.70011E+02	0.00000E+00	0.00000E+00	8.70011E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	8.68866E+02	0.00000E+00	0.00000E+00	8.68866E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	8.67704E+02	0.00000E+00	0.00000E+00	8.67704E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	8.66539E+02	0.00000E+00	0.00000E+00	8.66539E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	8.65386E+02	0.00000E+00	0.00000E+00	8.65386E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	8.64256E+02	0.00000E+00	0.00000E+00	8.64256E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	8.63166E+02	0.00000E+00	0.00000E+00	8.63166E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	8.62127E+02	0.00000E+00	0.00000E+00	8.62127E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	8.61151E+02	0.00000E+00	0.00000E+00	8.61151E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	8.60250E+02	0.00000E+00	0.00000E+00	8.60250E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	8.59429E+02	0.00000E+00	0.00000E+00	8.59429E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	8.58696E+02	0.00000E+00	0.00000E+00	8.58696E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	8.57765E+02	0.00000E+00	0.00000E+00	8.57765E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	8.56716E+02	0.00000E+00	0.00000E+00	8.56716E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	8.55839E+02	0.00000E+00	0.00000E+00	8.55839E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	8.55124E+02	0.00000E+00	0.00000E+00	8.55124E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	8.54558E+02	0.00000E+00	0.00000E+00	8.54558E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	8.54122E+02	0.00000E+00	0.00000E+00	8.54122E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	8.53795E+02	0.00000E+00	0.00000E+00	8.53795E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	8.53550E+02	0.00000E+00	0.00000E+00	8.53550E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	8.53363E+02	0.00000E+00	0.00000E+00	8.53363E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	8.53203E+02	0.00000E+00	0.00000E+00	8.53203E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	8.53046E+02	0.00000E+00	0.00000E+00	8.53046E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	8.52864E+02	0.00000E+00	0.00000E+00	8.52864E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	8.52633E+02	0.00000E+00	0.00000E+00	8.52633E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	8.52331E+02	0.00000E+00	0.00000E+00	8.52331E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	8.51942E+02	0.00000E+00	0.00000E+00	8.51942E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	8.51451E+02	0.00000E+00	0.00000E+00	8.51451E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	8.50851E+02	0.00000E+00	0.00000E+00	8.50851E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	8.50138E+02	0.00000E+00	0.00000E+00	8.50138E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	8.49315E+02	0.00000E+00	0.00000E+00	8.49315E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	8.48390E+02	0.00000E+00	0.00000E+00	8.48390E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	8.47372E+02	0.00000E+00	0.00000E+00	8.47372E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	8.46276E+02	0.00000E+00	0.00000E+00	8.46276E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	8.45122E+02	0.00000E+00	0.00000E+00	8.45122E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	8.43932E+02	0.00000E+00	0.00000E+00	8.43932E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	8.42727E+02	0.00000E+00	0.00000E+00	8.42727E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	8.41533E+02	0.00000E+00	0.00000E+00	8.41533E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	8.40375E+02	0.00000E+00	0.00000E+00	8.40375E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	8.39273E+02	0.00000E+00	0.00000E+00	8.39273E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	8.38251E+02	0.00000E+00	0.00000E+00	8.38251E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	8.37327E+02	0.00000E+00	0.00000E+00	8.37327E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	8.36517E+02	0.00000E+00	0.00000E+00	8.36517E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	8.35831E+02	0.00000E+00	0.00000E+00	8.35831E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	8.35278E+02	0.00000E+00	0.00000E+00	8.35278E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	8.34860E+02	0.00000E+00	0.00000E+00	8.34860E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

3.10000E+00	8.34577E+02	0.00000E+00	0.00000E+00	8.34577E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	8.33972E+02	0.00000E+00	0.00000E+00	8.33972E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	8.24470E+02	0.00000E+00	0.00000E+00	8.24470E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	8.19048E+02	0.00000E+00	0.00000E+00	8.19048E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	8.19003E+02	0.00000E+00	0.00000E+00	8.19003E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	8.19337E+02	0.00000E+00	0.00000E+00	8.19337E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	8.18987E+02	0.00000E+00	0.00000E+00	8.18987E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	7.89945E+02	0.00000E+00	0.00000E+00	7.89945E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	6.50881E+02	0.00000E+00	0.00000E+00	6.50881E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	4.20317E+02	0.00000E+00	0.00000E+00	4.20317E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	3.01569E+02	0.00000E+00	0.00000E+00	3.01569E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	2.31034E+02	0.00000E+00	0.00000E+00	2.31034E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	1.79460E+02	0.00000E+00	0.00000E+00	1.79460E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	1.38422E+02	0.00000E+00	0.00000E+00	1.38422E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	1.03808E+02	0.00000E+00	0.00000E+00	1.03808E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	7.28674E+01	0.00000E+00	0.00000E+00	7.28674E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	4.42241E+01	0.00000E+00	0.00000E+00	4.42241E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	2.03187E+01	0.00000E+00	0.00000E+00	2.03187E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	3.92213E+00	0.00000E+00	0.00000E+00	3.92213E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	7.96762E+00	0.00000E+00	0.00000E+00	7.96762E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	2.03907E+01	0.00000E+00	0.00000E+00	2.03907E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	3.95670E+01	0.00000E+00	0.00000E+00	3.95670E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	6.68439E+01	0.00000E+00	0.00000E+00	6.68439E+01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	1.02173E+02	0.00000E+00	0.00000E+00	1.02173E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	1.42414E+02	0.00000E+00	0.00000E+00	1.42414E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	1.83631E+02	0.00000E+00	0.00000E+00	1.83631E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	2.24955E+02	0.00000E+00	0.00000E+00	2.24955E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	2.66306E+02	0.00000E+00	0.00000E+00	2.66306E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	3.07651E+02	0.00000E+00	0.00000E+00	3.07651E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	3.48888E+02	0.00000E+00	0.00000E+00	3.48888E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	3.89808E+02	0.00000E+00	0.00000E+00	3.89808E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	4.30101E+02	0.00000E+00	0.00000E+00	4.30101E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	4.69355E+02	0.00000E+00	0.00000E+00	4.69355E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	5.07094E+02	0.00000E+00	0.00000E+00	5.07094E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	5.42802E+02	0.00000E+00	0.00000E+00	5.42802E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	5.75972E+02	0.00000E+00	0.00000E+00	5.75972E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	6.03815E+02	0.00000E+00	0.00000E+00	6.03815E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	6.23667E+02	0.00000E+00	0.00000E+00	6.23667E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	6.40604E+02	0.00000E+00	0.00000E+00	6.40604E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	6.54663E+02	0.00000E+00	0.00000E+00	6.54663E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	6.65978E+02	0.00000E+00	0.00000E+00	6.65978E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	6.74761E+02	0.00000E+00	0.00000E+00	6.74761E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	6.79943E+02	0.00000E+00	0.00000E+00	6.79943E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	6.83333E+02	0.00000E+00	0.00000E+00	6.83333E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	6.85511E+02	0.00000E+00	0.00000E+00	6.85511E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	6.86730E+02	0.00000E+00	0.00000E+00	6.86730E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	6.87230E+02	0.00000E+00	0.00000E+00	6.87230E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	6.87226E+02	0.00000E+00	0.00000E+00	6.87226E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	6.86918E+02	0.00000E+00	0.00000E+00	6.86918E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	6.86461E+02	0.00000E+00	0.00000E+00	6.86461E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

4.90000E+00	6.85990E+02	0.00000E+00	0.00000E+00	6.85990E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	6.85613E+02	0.00000E+00	0.00000E+00	6.85613E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	6.85415E+02	0.00000E+00	0.00000E+00	6.85415E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	6.85457E+02	0.00000E+00	0.00000E+00	6.85457E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	6.85780E+02	0.00000E+00	0.00000E+00	6.85780E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	6.86410E+02	0.00000E+00	0.00000E+00	6.86410E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	6.87354E+02	0.00000E+00	0.00000E+00	6.87354E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	6.88611E+02	0.00000E+00	0.00000E+00	6.88611E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	6.90170E+02	0.00000E+00	0.00000E+00	6.90170E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	6.92010E+02	0.00000E+00	0.00000E+00	6.92010E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	6.94108E+02	0.00000E+00	0.00000E+00	6.94108E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	6.96434E+02	0.00000E+00	0.00000E+00	6.96434E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	6.98956E+02	0.00000E+00	0.00000E+00	6.98956E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	7.01642E+02	0.00000E+00	0.00000E+00	7.01642E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	7.04462E+02	0.00000E+00	0.00000E+00	7.04462E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	7.07383E+02	0.00000E+00	0.00000E+00	7.07383E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	7.10375E+02	0.00000E+00	0.00000E+00	7.10375E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	7.13411E+02	0.00000E+00	0.00000E+00	7.13411E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	7.16465E+02	0.00000E+00	0.00000E+00	7.16465E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	7.19516E+02	0.00000E+00	0.00000E+00	7.19516E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	7.22544E+02	0.00000E+00	0.00000E+00	7.22544E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	7.25533E+02	0.00000E+00	0.00000E+00	7.25533E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	7.28469E+02	0.00000E+00	0.00000E+00	7.28469E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	7.31344E+02	0.00000E+00	0.00000E+00	7.31344E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	7.34148E+02	0.00000E+00	0.00000E+00	7.34148E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	7.36877E+02	0.00000E+00	0.00000E+00	7.36877E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	7.39528E+02	0.00000E+00	0.00000E+00	7.39528E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	7.42099E+02	0.00000E+00	0.00000E+00	7.42099E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	7.44592E+02	0.00000E+00	0.00000E+00	7.44592E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	7.47007E+02	0.00000E+00	0.00000E+00	7.47007E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	7.49348E+02	0.00000E+00	0.00000E+00	7.49348E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	7.51618E+02	0.00000E+00	0.00000E+00	7.51618E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	7.53821E+02	0.00000E+00	0.00000E+00	7.53821E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	7.55962E+02	0.00000E+00	0.00000E+00	7.55962E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 2105

Force exerted on Marker 200100 by Marker 1002102

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.84429E+03	0.00000E+00	3.84429E+03	0.00000E+00
3.33333E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.83415E+03	0.00000E+00	3.83415E+03	0.00000E+00
6.66667E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.81031E+03	0.00000E+00	3.81031E+03	0.00000E+00
1.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.77909E+03	0.00000E+00	3.77909E+03	0.00000E+00
1.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.74460E+03	0.00000E+00	3.74460E+03	0.00000E+00
1.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.68270E+03	0.00000E+00	3.68270E+03	0.00000E+00
2.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.62136E+03	0.00000E+00	3.62136E+03	0.00000E+00
2.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.56380E+03	0.00000E+00	3.56380E+03	0.00000E+00
2.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.51100E+03	0.00000E+00	3.51100E+03	0.00000E+00
3.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.46329E+03	0.00000E+00	3.46329E+03	0.00000E+00
3.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.42070E+03	0.00000E+00	3.42070E+03	0.00000E+00
3.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.38302E+03	0.00000E+00	3.38302E+03	0.00000E+00
4.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.34996E+03	0.00000E+00	3.34996E+03	0.00000E+00
4.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.32116E+03	0.00000E+00	3.32116E+03	0.00000E+00
4.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.29620E+03	0.00000E+00	3.29620E+03	0.00000E+00

5.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.27466E+03	0.00000E+00	3.27466E+03	0.00000E+00
5.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.25609E+03	0.00000E+00	3.25609E+03	0.00000E+00
5.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.24004E+03	0.00000E+00	3.24004E+03	0.00000E+00
6.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.22608E+03	0.00000E+00	3.22608E+03	0.00000E+00
6.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.21379E+03	0.00000E+00	3.21379E+03	0.00000E+00
6.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.20286E+03	0.00000E+00	3.20286E+03	0.00000E+00
7.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.19295E+03	0.00000E+00	3.19295E+03	0.00000E+00
7.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.18380E+03	0.00000E+00	3.18380E+03	0.00000E+00
7.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.17520E+03	0.00000E+00	3.17520E+03	0.00000E+00
8.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.16694E+03	0.00000E+00	3.16694E+03	0.00000E+00
8.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.15889E+03	0.00000E+00	3.15889E+03	0.00000E+00
8.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.15095E+03	0.00000E+00	3.15095E+03	0.00000E+00
9.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.14301E+03	0.00000E+00	3.14301E+03	0.00000E+00
9.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.13503E+03	0.00000E+00	3.13503E+03	0.00000E+00
9.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.12699E+03	0.00000E+00	3.12699E+03	0.00000E+00
1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.11886E+03	0.00000E+00	3.11886E+03	0.00000E+00
1.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.11085E+03	0.00000E+00	3.11085E+03	0.00000E+00
1.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.10325E+03	0.00000E+00	3.10325E+03	0.00000E+00
1.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.09627E+03	0.00000E+00	3.09627E+03	0.00000E+00
1.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.08988E+03	0.00000E+00	3.08988E+03	0.00000E+00
1.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.08393E+03	0.00000E+00	3.08393E+03	0.00000E+00
1.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.07824E+03	0.00000E+00	3.07824E+03	0.00000E+00
1.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.07267E+03	0.00000E+00	3.07267E+03	0.00000E+00
1.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.06708E+03	0.00000E+00	3.06708E+03	0.00000E+00
1.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.06136E+03	0.00000E+00	3.06136E+03	0.00000E+00
1.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.05540E+03	0.00000E+00	3.05540E+03	0.00000E+00
1.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.04914E+03	0.00000E+00	3.04914E+03	0.00000E+00
1.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.04252E+03	0.00000E+00	3.04252E+03	0.00000E+00
1.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.03552E+03	0.00000E+00	3.03552E+03	0.00000E+00
1.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.02812E+03	0.00000E+00	3.02812E+03	0.00000E+00
1.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.02035E+03	0.00000E+00	3.02035E+03	0.00000E+00
1.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.01225E+03	0.00000E+00	3.01225E+03	0.00000E+00
1.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.00385E+03	0.00000E+00	3.00385E+03	0.00000E+00
1.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.99526E+03	0.00000E+00	2.99526E+03	0.00000E+00
1.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.98656E+03	0.00000E+00	2.98656E+03	0.00000E+00
1.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.97783E+03	0.00000E+00	2.97783E+03	0.00000E+00
1.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.96920E+03	0.00000E+00	2.96920E+03	0.00000E+00
1.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.96075E+03	0.00000E+00	2.96075E+03	0.00000E+00
1.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.95260E+03	0.00000E+00	2.95260E+03	0.00000E+00
1.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.94483E+03	0.00000E+00	2.94483E+03	0.00000E+00
1.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.93755E+03	0.00000E+00	2.93755E+03	0.00000E+00
1.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.93082E+03	0.00000E+00	2.93082E+03	0.00000E+00
1.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.92470E+03	0.00000E+00	2.92470E+03	0.00000E+00
1.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.91923E+03	0.00000E+00	2.91923E+03	0.00000E+00
1.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.91230E+03	0.00000E+00	2.91230E+03	0.00000E+00
2.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.90449E+03	0.00000E+00	2.90449E+03	0.00000E+00
2.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.89795E+03	0.00000E+00	2.89795E+03	0.00000E+00
2.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.89264E+03	0.00000E+00	2.89264E+03	0.00000E+00
2.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.88843E+03	0.00000E+00	2.88843E+03	0.00000E+00
2.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.88519E+03	0.00000E+00	2.88519E+03	0.00000E+00
2.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.88275E+03	0.00000E+00	2.88275E+03	0.00000E+00
2.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.88093E+03	0.00000E+00	2.88093E+03	0.00000E+00
2.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.87954E+03	0.00000E+00	2.87954E+03	0.00000E+00
2.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.87836E+03	0.00000E+00	2.87836E+03	0.00000E+00

2.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.87719E+03	0.00000E+00	2.87719E+03	0.00000E+00
2.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.87584E+03	0.00000E+00	2.87584E+03	0.00000E+00
2.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.87412E+03	0.00000E+00	2.87412E+03	0.00000E+00
2.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.87188E+03	0.00000E+00	2.87188E+03	0.00000E+00
2.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.86899E+03	0.00000E+00	2.86899E+03	0.00000E+00
2.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.86535E+03	0.00000E+00	2.86535E+03	0.00000E+00
2.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.86089E+03	0.00000E+00	2.86089E+03	0.00000E+00
2.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.85560E+03	0.00000E+00	2.85560E+03	0.00000E+00
2.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.84950E+03	0.00000E+00	2.84950E+03	0.00000E+00
2.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.84265E+03	0.00000E+00	2.84265E+03	0.00000E+00
2.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.83510E+03	0.00000E+00	2.83510E+03	0.00000E+00
2.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.82699E+03	0.00000E+00	2.82699E+03	0.00000E+00
2.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.81846E+03	0.00000E+00	2.81846E+03	0.00000E+00
2.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.80965E+03	0.00000E+00	2.80965E+03	0.00000E+00
2.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.80076E+03	0.00000E+00	2.80076E+03	0.00000E+00
2.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.79194E+03	0.00000E+00	2.79194E+03	0.00000E+00
2.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.78340E+03	0.00000E+00	2.78340E+03	0.00000E+00
2.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.77528E+03	0.00000E+00	2.77528E+03	0.00000E+00
2.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.76775E+03	0.00000E+00	2.76775E+03	0.00000E+00
2.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.76094E+03	0.00000E+00	2.76094E+03	0.00000E+00
2.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.75498E+03	0.00000E+00	2.75498E+03	0.00000E+00
3.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.74994E+03	0.00000E+00	2.74994E+03	0.00000E+00
3.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.74588E+03	0.00000E+00	2.74588E+03	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.74280E+03	0.00000E+00	2.74280E+03	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.74072E+03	0.00000E+00	2.74072E+03	0.00000E+00
3.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.73628E+03	0.00000E+00	2.73628E+03	0.00000E+00
3.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.66669E+03	0.00000E+00	2.66669E+03	0.00000E+00
3.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.62716E+03	0.00000E+00	2.62716E+03	0.00000E+00
3.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.62684E+03	0.00000E+00	2.62684E+03	0.00000E+00
3.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.62926E+03	0.00000E+00	2.62926E+03	0.00000E+00
3.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.62672E+03	0.00000E+00	2.62672E+03	0.00000E+00
3.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.41737E+03	0.00000E+00	2.41737E+03	0.00000E+00
3.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.47605E+03	0.00000E+00	1.47605E+03	0.00000E+00
3.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.16034E+02	0.00000E+00	2.16034E+02	0.00000E+00
3.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.11180E+02	0.00000E+00	-2.11180E+02	0.00000E+00
3.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.58886E+02	0.00000E+00	-3.58886E+02	0.00000E+00
3.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	4.03081E+02	0.00000E+00	-4.03081E+02	0.00000E+00
3.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.93075E+02	0.00000E+00	-3.93075E+02	0.00000E+00
3.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.49737E+02	0.00000E+00	-3.49737E+02	0.00000E+00
3.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.81557E+02	0.00000E+00	-2.81557E+02	0.00000E+00
3.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.91971E+02	0.00000E+00	-1.91971E+02	0.00000E+00
3.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	9.66406E+01	0.00000E+00	-9.66406E+01	0.00000E+00
3.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.98502E+01	0.00000E+00	-1.98502E+01	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.96984E+01	0.00000E+00	-3.96984E+01	0.00000E+00
3.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	9.69570E+01	0.00000E+00	-9.69570E+01	0.00000E+00
3.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.74899E+02	0.00000E+00	-1.74899E+02	0.00000E+00
3.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.64882E+02	0.00000E+00	-2.64882E+02	0.00000E+00
4.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.46848E+02	0.00000E+00	-3.46848E+02	0.00000E+00
4.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.95954E+02	0.00000E+00	-3.95954E+02	0.00000E+00
4.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	4.01757E+02	0.00000E+00	-4.01757E+02	0.00000E+00

4.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	3.67117E+02	0.00000E+00	-3.67117E+02	0.00000E+00
4.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.96533E+02	0.00000E+00	-2.96533E+02	0.00000E+00
4.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.94310E+02	0.00000E+00	-1.94310E+02	0.00000E+00
4.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	6.46246E+01	0.00000E+00	-6.46246E+01	0.00000E+00
4.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	8.81735E+01	0.00000E+00	8.81735E+01	0.00000E+00
4.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.59366E+02	0.00000E+00	2.59366E+02	0.00000E+00
4.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	4.43749E+02	0.00000E+00	4.43749E+02	0.00000E+00
4.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	6.35674E+02	0.00000E+00	6.35674E+02	0.00000E+00
4.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	8.29240E+02	0.00000E+00	8.29240E+02	0.00000E+00
4.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.01854E+03	0.00000E+00	1.01854E+03	0.00000E+00
4.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.18398E+03	0.00000E+00	1.18398E+03	0.00000E+00
4.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.30533E+03	0.00000E+00	1.30533E+03	0.00000E+00
4.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.41101E+03	0.00000E+00	1.41101E+03	0.00000E+00
4.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.50016E+03	0.00000E+00	1.50016E+03	0.00000E+00
4.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.57283E+03	0.00000E+00	1.57283E+03	0.00000E+00
4.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.62978E+03	0.00000E+00	1.62978E+03	0.00000E+00
4.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.66362E+03	0.00000E+00	1.66362E+03	0.00000E+00
4.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.68583E+03	0.00000E+00	1.68583E+03	0.00000E+00
4.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70014E+03	0.00000E+00	1.70014E+03	0.00000E+00
4.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70816E+03	0.00000E+00	1.70816E+03	0.00000E+00
4.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.71145E+03	0.00000E+00	1.71145E+03	0.00000E+00
4.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.71143E+03	0.00000E+00	1.71143E+03	0.00000E+00
4.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70940E+03	0.00000E+00	1.70940E+03	0.00000E+00
4.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70639E+03	0.00000E+00	1.70639E+03	0.00000E+00
4.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70329E+03	0.00000E+00	1.70329E+03	0.00000E+00
4.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70081E+03	0.00000E+00	1.70081E+03	0.00000E+00
4.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.69951E+03	0.00000E+00	1.69951E+03	0.00000E+00
5.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.69979E+03	0.00000E+00	1.69979E+03	0.00000E+00
5.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70191E+03	0.00000E+00	1.70191E+03	0.00000E+00
5.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.70606E+03	0.00000E+00	1.70606E+03	0.00000E+00
5.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.71227E+03	0.00000E+00	1.71227E+03	0.00000E+00
5.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.72056E+03	0.00000E+00	1.72056E+03	0.00000E+00
5.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.73085E+03	0.00000E+00	1.73085E+03	0.00000E+00
5.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.74301E+03	0.00000E+00	1.74301E+03	0.00000E+00
5.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.75690E+03	0.00000E+00	1.75690E+03	0.00000E+00
5.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.77233E+03	0.00000E+00	1.77233E+03	0.00000E+00
5.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.78910E+03	0.00000E+00	1.78910E+03	0.00000E+00
5.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.80700E+03	0.00000E+00	1.80700E+03	0.00000E+00
5.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.82584E+03	0.00000E+00	1.82584E+03	0.00000E+00
5.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.84540E+03	0.00000E+00	1.84540E+03	0.00000E+00
5.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.86548E+03	0.00000E+00	1.86548E+03	0.00000E+00
5.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.88591E+03	0.00000E+00	1.88591E+03	0.00000E+00
5.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.90652E+03	0.00000E+00	1.90652E+03	0.00000E+00
5.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.92716E+03	0.00000E+00	1.92716E+03	0.00000E+00
5.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.94769E+03	0.00000E+00	1.94769E+03	0.00000E+00
5.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.96801E+03	0.00000E+00	1.96801E+03	0.00000E+00
5.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	1.98802E+03	0.00000E+00	1.98802E+03	0.00000E+00
5.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.00766E+03	0.00000E+00	2.00766E+03	0.00000E+00
5.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.02685E+03	0.00000E+00	2.02685E+03	0.00000E+00
5.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.04558E+03	0.00000E+00	2.04558E+03	0.00000E+00
5.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.06380E+03	0.00000E+00	2.06380E+03	0.00000E+00
5.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.08151E+03	0.00000E+00	2.08151E+03	0.00000E+00
5.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.09872E+03	0.00000E+00	2.09872E+03	0.00000E+00
5.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.11542E+03	0.00000E+00	2.11542E+03	0.00000E+00

5.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.13164E+03	0.00000E+00	2.13164E+03	0.00000E+00
5.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.14739E+03	0.00000E+00	2.14739E+03	0.00000E+00
5.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.16271E+03	0.00000E+00	2.16271E+03	0.00000E+00
6.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	2.17762E+03	0.00000E+00	2.17762E+03	0.00000E+00

1Boat 30 mph
Request Number 3001

Target Boat Displacement

Displacement of Marker 300100 relative to Marker 1003001

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	2.00141E+01	-2.00000E+01	0.00000E+00	7.50000E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.33333E-02	2.00141E+01	-2.00000E+01	0.00000E+00	7.49972E-01	9.00000E+01	0.00000E+00	0.00000E+00
6.66667E-02	2.00141E+01	-2.00000E+01	0.00000E+00	7.49896E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.49785E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.49648E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.49497E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.49337E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.49179E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.49027E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48886E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48759E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48647E-01	9.00000E+01	0.00000E+00	0.00000E+00
4.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48552E-01	9.00000E+01	0.00000E+00	0.00000E+00
4.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48474E-01	9.00000E+01	0.00000E+00	0.00000E+00
4.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48412E-01	9.00000E+01	0.00000E+00	0.00000E+00
5.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48365E-01	9.00000E+01	0.00000E+00	0.00000E+00
5.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48332E-01	9.00000E+01	0.00000E+00	0.00000E+00
5.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48312E-01	9.00000E+01	0.00000E+00	0.00000E+00
6.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48302E-01	9.00000E+01	0.00000E+00	0.00000E+00
6.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48301E-01	9.00000E+01	0.00000E+00	0.00000E+00
6.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48308E-01	9.00000E+01	0.00000E+00	0.00000E+00
7.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48320E-01	9.00000E+01	0.00000E+00	0.00000E+00
7.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48336E-01	9.00000E+01	0.00000E+00	0.00000E+00
7.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48355E-01	9.00000E+01	0.00000E+00	0.00000E+00
8.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48375E-01	9.00000E+01	0.00000E+00	0.00000E+00
8.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48395E-01	9.00000E+01	0.00000E+00	0.00000E+00
8.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48415E-01	9.00000E+01	0.00000E+00	0.00000E+00
9.00000E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48434E-01	9.00000E+01	0.00000E+00	0.00000E+00
9.33333E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48452E-01	9.00000E+01	0.00000E+00	0.00000E+00
9.66667E-01	2.00140E+01	-2.00000E+01	0.00000E+00	7.48467E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.00000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48481E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.03333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.06667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48501E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.10000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48508E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.13333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48514E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.16667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48517E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.20000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48519E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.23333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48520E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.26667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48520E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.30000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48518E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.33333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48517E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.36667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48514E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.40000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48512E-01	9.00000E+01	0.00000E+00	0.00000E+00

1.43333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48509E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.46667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48507E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.50000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48504E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.53333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48502E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.56667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48500E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.60000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48498E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.63333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48496E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.66667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.70000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48494E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.73333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48493E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.76667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.80000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.83333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.86667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.90000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.93333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
1.96667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48492E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.00000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48493E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.03333E+00	2.00140E+01	-2.00000E+	0.00000E+00	7.48493E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.06667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48493E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.10000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48494E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.13333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48494E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.16667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48494E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.20000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48494E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.23333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.26667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.30000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.33333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.36667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.40000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.43333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.46667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.50000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.53333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.56667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.60000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.63333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.66667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.70000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.73333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.76667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.80000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.83333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.86667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.90000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.93333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
2.96667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.00000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.03333E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.06667E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.10000E+00	2.00140E+01	-2.00000E+01	0.00000E+00	7.48495E-01	9.00000E+01	0.00000E+00	0.00000E+00
3.13333E+00	2.00147E+01	-2.00007E+01	0.00000E+00	7.48144E-01	9.00000E+01	0.00000E+00	2.73254E-03
3.16667E+00	2.00319E+01	-2.00182E+01	0.00000E+00	7.39859E-01	9.00000E+01	0.00000E+00	6.64038E-02
3.20000E+00	2.00519E+01	-2.00385E+01	0.00000E+00	7.33427E-01	9.00000E+01	0.00000E+00	1.18053E-01

3.23333E+00	2.00697E+01	-2.00563E+01	0.00000E+00	7.31742E-01	9.00000E+01	0.00000E+00	1.36625E-01
3.26667E+00	2.00902E+01	-2.00769E+01	0.00000E+00	7.31392E-01	9.00000E+01	0.00000E+00	1.47804E-01
3.30000E+00	2.01153E+01	-2.01020E+01	0.00000E+00	7.31126E-01	9.00000E+01	0.00000E+00	1.39628E-01
3.33333E+00	2.01870E+01	-2.01747E+01	0.00000E+00	7.03442E-01	9.00000E+01	0.00000E+00	-6.68982E-01
3.36667E+00	2.03620E+01	-2.03539E+01	0.00000E+00	5.77114E-01	9.00000E+01	0.00000E+00	-3.93785E+00
3.40000E+00	2.05900E+01	-2.05868E+01	0.00000E+00	3.64039E-01	9.00000E+01	0.00000E+00	-9.20877E+00
3.43333E+00	2.08214E+01	-2.08207E+01	0.00000E+00	1.69625E-01	9.00000E+01	0.00000E+00	-1.42268E+01
3.46667E+00	2.10434E+01	-2.10434E+01	0.00000E+00	3.38453E-02	9.00000E+01	0.00000E+00	-1.82232E+01
3.50000E+00	2.12557E+01	-2.12557E+01	0.00000E+00	-4.64369E-02	9.00000E+01	0.00000E+00	-2.13031E+01
3.53333E+00	2.14590E+01	-2.14589E+01	0.00000E+00	-7.93280E-02	9.00000E+01	0.00000E+00	-2.35860E+01
3.56667E+00	2.16553E+01	-2.16552E+01	0.00000E+00	-7.80485E-02	9.00000E+01	0.00000E+00	-2.50946E+01
3.60000E+00	2.18466E+01	-2.18465E+01	0.00000E+00	-5.70535E-02	9.00000E+01	0.00000E+00	-2.58373E+01
3.63333E+00	2.20325E+01	-2.20325E+01	0.00000E+00	-2.59742E-02	9.00000E+01	0.00000E+00	-2.58808E+01
3.66667E+00	2.22110E+01	-2.22110E+01	0.00000E+00	2.12294E-02	9.00000E+01	0.00000E+00	-2.55270E+01
3.70000E+00	2.23835E+01	-2.23834E+01	0.00000E+00	8.87112E-02	9.00000E+01	0.00000E+00	-2.50238E+01
3.73333E+00	2.25514E+01	-2.25507E+01	0.00000E+00	1.71023E-01	9.00000E+01	0.00000E+00	-2.44275E+01
3.76667E+00	2.27151E+01	-2.27136E+01	0.00000E+00	2.61354E-01	9.00000E+01	0.00000E+00	-2.37537E+01
3.80000E+00	2.28751E+01	-2.28724E+01	0.00000E+00	3.54204E-01	9.00000E+01	0.00000E+00	-2.30258E+01
3.83333E+00	2.30318E+01	-2.30275E+01	0.00000E+00	4.44048E-01	9.00000E+01	0.00000E+00	-2.22902E+01
3.86667E+00	2.31843E+01	-2.31786E+01	0.00000E+00	5.17225E-01	9.00000E+01	0.00000E+00	-2.17796E+01
3.90000E+00	2.33270E+01	-2.33200E+01	0.00000E+00	5.70233E-01	9.00000E+01	0.00000E+00	-2.15434E+01
3.93333E+00	2.34612E+01	-2.34531E+01	0.00000E+00	6.15825E-01	9.00000E+01	0.00000E+00	-2.13077E+01
3.96667E+00	2.35903E+01	-2.35811E+01	0.00000E+00	6.58857E-01	9.00000E+01	0.00000E+00	-2.09686E+01
4.00000E+00	2.37148E+01	-2.37045E+01	0.00000E+00	6.97986E-01	9.00000E+01	0.00000E+00	-2.05566E+01
4.03333E+00	2.38348E+01	-2.38236E+01	0.00000E+00	7.32597E-01	9.00000E+01	0.00000E+00	-2.00877E+01
4.06667E+00	2.39507E+01	-2.39386E+01	0.00000E+00	7.62039E-01	9.00000E+01	0.00000E+00	-1.95825E+01
4.10000E+00	2.40626E+01	-2.40497E+01	0.00000E+00	7.86168E-01	9.00000E+01	0.00000E+00	-1.90534E+01
4.13333E+00	2.41708E+01	-2.41574E+01	0.00000E+00	8.05087E-01	9.00000E+01	0.00000E+00	-1.85091E+01
4.16667E+00	2.42755E+01	-2.42617E+01	0.00000E+00	8.19135E-01	9.00000E+01	0.00000E+00	-1.79571E+01
4.20000E+00	2.43769E+01	-2.43628E+01	0.00000E+00	8.28682E-01	9.00000E+01	0.00000E+00	-1.74018E+01
4.23333E+00	2.44753E+01	-2.44610E+01	0.00000E+00	8.34184E-01	9.00000E+01	0.00000E+00	-1.68468E+01
4.26667E+00	2.45707E+01	-2.45565E+01	0.00000E+00	8.36151E-01	9.00000E+01	0.00000E+00	-1.62949E+01
4.30000E+00	2.46634E+01	-2.46492E+01	0.00000E+00	8.35120E-01	9.00000E+01	0.00000E+00	-1.57485E+01
4.33333E+00	2.47535E+01	-2.47395E+01	0.00000E+00	8.31631E-01	9.00000E+01	0.00000E+00	-1.52092E+01
4.36667E+00	2.48411E+01	-2.48274E+01	0.00000E+00	8.26216E-01	9.00000E+01	0.00000E+00	-1.46785E+01
4.40000E+00	2.49265E+01	-2.49130E+01	0.00000E+00	8.19235E-01	9.00000E+01	0.00000E+00	-1.41570E+01
4.43333E+00	2.50096E+01	-2.49965E+01	0.00000E+00	8.11264E-01	9.00000E+01	0.00000E+00	-1.36461E+01
4.46667E+00	2.50908E+01	-2.50779E+01	0.00000E+00	8.02798E-01	9.00000E+01	0.00000E+00	-1.31467E+01
4.50000E+00	2.51700E+01	-2.51575E+01	0.00000E+00	7.94222E-01	9.00000E+01	0.00000E+00	-1.26595E+01
4.53333E+00	2.52474E+01	-2.52351E+01	0.00000E+00	7.85845E-01	9.00000E+01	0.00000E+00	-1.21852E+01
4.56667E+00	2.53230E+01	-2.53111E+01	0.00000E+00	7.77912E-01	9.00000E+01	0.00000E+00	-1.17243E+01
4.60000E+00	2.53970E+01	-2.53853E+01	0.00000E+00	7.70611E-01	9.00000E+01	0.00000E+00	-1.12771E+01
4.63333E+00	2.54694E+01	-2.54580E+01	0.00000E+00	7.64071E-01	9.00000E+01	0.00000E+00	-1.08439E+01
4.66667E+00	2.55403E+01	-2.55291E+01	0.00000E+00	7.58370E-01	9.00000E+01	0.00000E+00	-1.04247E+01
4.70000E+00	2.56098E+01	-2.55987E+01	0.00000E+00	7.53540E-01	9.00000E+01	0.00000E+00	-1.00195E+01
4.73333E+00	2.56779E+01	-2.56669E+01	0.00000E+00	7.49578E-01	9.00000E+01	0.00000E+00	-9.62831E+00
4.76667E+00	2.57446E+01	-2.57338E+01	0.00000E+00	7.46447E-01	9.00000E+01	0.00000E+00	-9.25086E+00
4.80000E+00	2.58101E+01	-2.57993E+01	0.00000E+00	7.44091E-01	9.00000E+01	0.00000E+00	-8.88697E+00
4.83333E+00	2.58743E+01	-2.58636E+01	0.00000E+00	7.42439E-01	9.00000E+01	0.00000E+00	-8.53638E+00
4.86667E+00	2.59373E+01	-2.59267E+01	0.00000E+00	7.41402E-01	9.00000E+01	0.00000E+00	-8.19879E+00
4.90000E+00	2.59992E+01	-2.59886E+01	0.00000E+00	7.40890E-01	9.00000E+01	0.00000E+00	-7.87387E+00
4.93333E+00	2.60600E+01	-2.60494E+01	0.00000E+00	7.40813E-01	9.00000E+01	0.00000E+00	-7.56129E+00
4.96667E+00	2.61197E+01	-2.61092E+01	0.00000E+00	7.41085E-01	9.00000E+01	0.00000E+00	-7.26069E+00
5.00000E+00	2.61783E+01	-2.61678E+01	0.00000E+00	7.41621E-01	9.00000E+01	0.00000E+00	-6.97170E+00

5.03333E+00	2.62360E+01	-2.62255E+01	0.00000E+00	7.42346E-01	9.00000E+01	0.00000E+00	-6.69396E+00
5.06667E+00	2.62927E+01	-2.62822E+01	0.00000E+00	7.43193E-01	9.00000E+01	0.00000E+00	-6.42708E+00
5.10000E+00	2.63485E+01	-2.63380E+01	0.00000E+00	7.44103E-01	9.00000E+01	0.00000E+00	-6.17069E+00
5.13333E+00	2.64033E+01	-2.63928E+01	0.00000E+00	7.45028E-01	9.00000E+01	0.00000E+00	-5.92442E+00
5.16667E+00	2.64573E+01	-2.64468E+01	0.00000E+00	7.45928E-01	9.00000E+01	0.00000E+00	-5.68790E+00
5.20000E+00	2.65104E+01	-2.64999E+01	0.00000E+00	7.46773E-01	9.00000E+01	0.00000E+00	-5.46076E+00
5.23333E+00	2.65627E+01	-2.65521E+01	0.00000E+00	7.47540E-01	9.00000E+01	0.00000E+00	-5.24266E+00
5.26667E+00	2.66141E+01	-2.66036E+01	0.00000E+00	7.48216E-01	9.00000E+01	0.00000E+00	-5.03325E+00
5.30000E+00	2.66648E+01	-2.66543E+01	0.00000E+00	7.48792E-01	9.00000E+01	0.00000E+00	-4.83220E+00
5.33333E+00	2.67148E+01	-2.67043E+01	0.00000E+00	7.49265E-01	9.00000E+01	0.00000E+00	-4.63917E+00
5.36667E+00	2.67640E+01	-2.67535E+01	0.00000E+00	7.49636E-01	9.00000E+01	0.00000E+00	-4.45386E+00
5.40000E+00	2.68125E+01	-2.68020E+01	0.00000E+00	7.49911E-01	9.00000E+01	0.00000E+00	-4.27596E+00
5.43333E+00	2.68603E+01	-2.68498E+01	0.00000E+00	7.50098E-01	9.00000E+01	0.00000E+00	-4.10517E+00
5.46667E+00	2.69074E+01	-2.68969E+01	0.00000E+00	7.50206E-01	9.00000E+01	0.00000E+00	-3.94123E+00
5.50000E+00	2.69539E+01	-2.69434E+01	0.00000E+00	7.50245E-01	9.00000E+01	0.00000E+00	-3.78385E+00
5.53333E+00	2.69997E+01	-2.69893E+01	0.00000E+00	7.50228E-01	9.00000E+01	0.00000E+00	-3.63277E+00
5.56667E+00	2.70449E+01	-2.70345E+01	0.00000E+00	7.50164E-01	9.00000E+01	0.00000E+00	-3.48774E+00
5.60000E+00	2.70895E+01	-2.70791E+01	0.00000E+00	7.50065E-01	9.00000E+01	0.00000E+00	-3.34852E+00
5.63333E+00	2.71336E+01	-2.71232E+01	0.00000E+00	7.49939E-01	9.00000E+01	0.00000E+00	-3.21488E+00
5.66667E+00	2.71770E+01	-2.71667E+01	0.00000E+00	7.49798E-01	9.00000E+01	0.00000E+00	-3.08658E+00
5.70000E+00	2.72199E+01	-2.72096E+01	0.00000E+00	7.49647E-01	9.00000E+01	0.00000E+00	-2.96342E+00
5.73333E+00	2.72623E+01	-2.72520E+01	0.00000E+00	7.49494E-01	9.00000E+01	0.00000E+00	-2.84519E+00
5.76667E+00	2.73041E+01	-2.72938E+01	0.00000E+00	7.49343E-01	9.00000E+01	0.00000E+00	-2.73169E+00
5.80000E+00	2.73454E+01	-2.73352E+01	0.00000E+00	7.49200E-01	9.00000E+01	0.00000E+00	-2.62273E+00
5.83333E+00	2.73862E+01	-2.73760E+01	0.00000E+00	7.49068E-01	9.00000E+01	0.00000E+00	-2.51812E+00
5.86667E+00	2.74266E+01	-2.74163E+01	0.00000E+00	7.48949E-01	9.00000E+01	0.00000E+00	-2.41770E+00
5.90000E+00	2.74664E+01	-2.74562E+01	0.00000E+00	7.48843E-01	9.00000E+01	0.00000E+00	-2.32129E+00
5.93333E+00	2.75058E+01	-2.74956E+01	0.00000E+00	7.48752E-01	9.00000E+01	0.00000E+00	-2.22873E+00
5.96667E+00	2.75447E+01	-2.75345E+01	0.00000E+00	7.48676E-01	9.00000E+01	0.00000E+00	-2.13987E+00
6.00000E+00	2.75832E+01	-2.75730E+01	0.00000E+00	7.48614E-01	9.00000E+01	0.00000E+00	-2.05455E+00

1Boat 30 mph
Request Number 3002

Target Boat Velocity

Velocity of Marker 300100 relative to Marker 1003001

Time	Vm	Vx	Vy	Vz	Wm	Wx	Wy	Wz
0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	1.63713E-03	0.00000E+00	0.00000E+00	-1.63713E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	2.89394E-03	0.00000E+00	0.00000E+00	-2.89394E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	3.79846E-03	0.00000E+00	0.00000E+00	-3.79846E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	4.38707E-03	0.00000E+00	0.00000E+00	-4.38707E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	4.69917E-03	0.00000E+00	0.00000E+00	-4.69917E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	4.77438E-03	0.00000E+00	0.00000E+00	-4.77438E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	4.66026E-03	0.00000E+00	0.00000E+00	-4.66026E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	4.39913E-03	0.00000E+00	0.00000E+00	-4.39913E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	4.02940E-03	0.00000E+00	0.00000E+00	-4.02940E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	3.58681E-03	0.00000E+00	0.00000E+00	-3.58681E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	3.10130E-03	0.00000E+00	0.00000E+00	-3.10130E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	2.60023E-03	0.00000E+00	0.00000E+00	-2.60023E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	2.10375E-03	0.00000E+00	0.00000E+00	-2.10375E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	1.62863E-03	0.00000E+00	0.00000E+00	-1.62863E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	1.18748E-03	0.00000E+00	0.00000E+00	-1.18748E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	7.88838E-04	0.00000E+00	0.00000E+00	-7.88838E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

5.66667E-01	4.40263E-04	0.00000E+00	0.00000E+00	-4.40263E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	1.44955E-04	0.00000E+00	0.00000E+00	-1.44955E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	9.68517E-05	0.00000E+00	0.00000E+00	9.68517E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	2.87132E-04	0.00000E+00	0.00000E+00	2.87132E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	4.28904E-04	0.00000E+00	0.00000E+00	4.28904E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	5.26972E-04	0.00000E+00	0.00000E+00	5.26972E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	5.86481E-04	0.00000E+00	0.00000E+00	5.86481E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	6.12849E-04	0.00000E+00	0.00000E+00	6.12849E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	6.11691E-04	0.00000E+00	0.00000E+00	6.11691E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	5.88505E-04	0.00000E+00	0.00000E+00	5.88505E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	5.48452E-04	0.00000E+00	0.00000E+00	5.48452E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	4.96306E-04	0.00000E+00	0.00000E+00	4.96306E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	4.36451E-04	0.00000E+00	0.00000E+00	4.36451E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	3.72641E-04	0.00000E+00	0.00000E+00	3.72641E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	3.07916E-04	0.00000E+00	0.00000E+00	3.07916E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	2.44824E-04	0.00000E+00	0.00000E+00	2.44824E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	1.85282E-04	0.00000E+00	0.00000E+00	1.85282E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	1.30771E-04	0.00000E+00	0.00000E+00	1.30771E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	8.22595E-05	0.00000E+00	0.00000E+00	8.22595E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	4.03614E-05	0.00000E+00	0.00000E+00	4.03614E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	5.27084E-06	0.00000E+00	0.00000E+00	5.27084E-06	1.01394E-07	0.00000E+00	1.01394E-07	0.00000E+00
1.26667E+00	2.31248E-05	0.00000E+00	0.00000E+00	-2.31248E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	4.50291E-05	0.00000E+00	0.00000E+00	-4.50291E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	6.09860E-05	0.00000E+00	0.00000E+00	-6.09860E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	7.15454E-05	0.00000E+00	0.00000E+00	-7.15454E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	7.73040E-05	0.00000E+00	0.00000E+00	-7.73040E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	7.90398E-05	0.00000E+00	0.00000E+00	-7.90398E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	7.77004E-05	0.00000E+00	0.00000E+00	-7.77004E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	7.38000E-05	0.00000E+00	0.00000E+00	-7.38000E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	6.79961E-05	0.00000E+00	0.00000E+00	-6.79961E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	6.08688E-05	0.00000E+00	0.00000E+00	-6.08688E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	5.29065E-05	0.00000E+00	0.00000E+00	-5.29065E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	4.46005E-05	0.00000E+00	0.00000E+00	-4.46005E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	3.63422E-05	0.00000E+00	0.00000E+00	-3.63422E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	2.83772E-05	0.00000E+00	0.00000E+00	-2.83772E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	2.09173E-05	0.00000E+00	0.00000E+00	-2.09173E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	1.41426E-05	0.00000E+00	0.00000E+00	-1.41426E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	8.16652E-06	0.00000E+00	0.00000E+00	-8.16652E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	3.05964E-06	0.00000E+00	0.00000E+00	-3.05964E-06	1.09380E-07	0.00000E+00	1.09380E-07	0.00000E+00
1.86667E+00	1.08166E-06	0.00000E+00	0.00000E+00	1.08166E-06	1.08168E-07	0.00000E+00	1.08168E-07	0.00000E+00
1.90000E+00	4.29726E-06	0.00000E+00	0.00000E+00	4.29726E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	6.71605E-06	0.00000E+00	0.00000E+00	6.71605E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	8.44161E-06	0.00000E+00	0.00000E+00	8.44161E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	9.54621E-06	0.00000E+00	0.00000E+00	9.54621E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	1.00908E-05	0.00000E+00	0.00000E+00	1.00908E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	1.01312E-05	0.00000E+00	0.00000E+00	1.01312E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	9.78995E-06	0.00000E+00	0.00000E+00	9.78995E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	9.19210E-06	0.00000E+00	0.00000E+00	9.19210E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	8.44253E-06	0.00000E+00	0.00000E+00	8.44253E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	7.45341E-06	0.00000E+00	0.00000E+00	7.45341E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	6.39551E-06	0.00000E+00	0.00000E+00	6.39551E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	5.30133E-06	0.00000E+00	0.00000E+00	5.30133E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	4.23745E-06	0.00000E+00	0.00000E+00	4.23745E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	3.24271E-06	0.00000E+00	0.00000E+00	3.24271E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

2.36667E+00	2.28185E-06	0.00000E+00	0.00000E+00	2.28185E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	1.46876E-06	0.00000E+00	0.00000E+00	1.46876E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	7.79421E-07	0.00000E+00	0.00000E+00	7.79421E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	1.88516E-07	0.00000E+00	0.00000E+00	1.88516E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	2.94779E-07	0.00000E+00	0.00000E+00	-2.94779E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	6.64780E-07	0.00000E+00	0.00000E+00	-6.64780E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	9.33748E-07	0.00000E+00	0.00000E+00	-9.33748E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	1.06338E-06	0.00000E+00	0.00000E+00	-1.06338E-06	1.00926E-07	0.00000E+00	1.00926E-07	0.00000E+00
2.63333E+00	1.21523E-06	0.00000E+00	0.00000E+00	-1.21523E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	1.34566E-06	0.00000E+00	0.00000E+00	-1.34566E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	1.32528E-06	0.00000E+00	0.00000E+00	-1.32528E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	1.37072E-06	0.00000E+00	0.00000E+00	-1.37072E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	1.38061E-06	0.00000E+00	0.00000E+00	-1.38061E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	1.26842E-06	0.00000E+00	0.00000E+00	-1.26842E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	1.09652E-06	0.00000E+00	0.00000E+00	-1.09652E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	9.03745E-07	0.00000E+00	0.00000E+00	-9.03745E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	6.57714E-07	0.00000E+00	0.00000E+00	-6.57714E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	4.01584E-07	0.00000E+00	0.00000E+00	-4.01584E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	3.37348E-07	0.00000E+00	0.00000E+00	-3.37348E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	2.83173E-07	0.00000E+00	0.00000E+00	-2.83173E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	1.74210E-07	0.00000E+00	0.00000E+00	-1.74210E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	1.39718E-01	-1.24657E-01	0.00000E+00	-6.31003E-02	8.54094E-03	0.00000E+00	8.54094E-03	0.00000E+00
3.16667E+00	7.02541E-01	-6.48619E-01	0.00000E+00	-2.69921E-01	3.65771E-02	0.00000E+00	3.65771E-02	0.00000E+00
3.20000E+00	5.09229E-01	-5.03216E-01	0.00000E+00	-7.80242E-02	1.26069E-02	0.00000E+00	1.26069E-02	0.00000E+00
3.23333E+00	5.66361E-01	-5.65894E-01	0.00000E+00	-2.29962E-02	6.84705E-03	0.00000E+00	6.84705E-03	0.00000E+00
3.26667E+00	6.72853E-01	-6.72851E-01	0.00000E+00	-1.62067E-03	5.29419E-03	0.00000E+00	5.29419E-03	0.00000E+00
3.30000E+00	9.40985E-01	-9.37898E-01	0.00000E+00	-7.61635E-02	4.67985E-02	0.00000E+00	-4.67985E-02	0.00000E+00
3.33333E+00	4.26407E+00	-3.79524E+00	0.00000E+00	-1.94382E+00	9.50891E-01	0.00000E+00	-9.50891E-01	0.00000E+00
3.36667E+00	8.65639E+00	-6.61009E+00	0.00000E+00	-5.58927E+00	2.43563E+00	0.00000E+00	-2.43563E+00	0.00000E+00
3.40000E+00	9.78599E+00	-7.17629E+00	0.00000E+00	-6.65331E+00	2.88626E+00	0.00000E+00	-2.88626E+00	0.00000E+00
3.43333E+00	8.46133E+00	-6.85195E+00	0.00000E+00	-4.96435E+00	2.35747E+00	0.00000E+00	-2.35747E+00	0.00000E+00
3.46667E+00	7.26155E+00	-6.51697E+00	0.00000E+00	-3.20300E+00	1.83683E+00	0.00000E+00	-1.83683E+00	0.00000E+00
3.50000E+00	6.43323E+00	-6.22182E+00	0.00000E+00	-1.63566E+00	1.39522E+00	0.00000E+00	-1.39522E+00	0.00000E+00
3.53333E+00	5.99218E+00	-5.97922E+00	0.00000E+00	-3.93898E-01	9.96195E-01	0.00000E+00	-9.96195E-01	0.00000E+00
3.56667E+00	5.82356E+00	-5.80930E+00	0.00000E+00	4.07325E-01	5.97286E-01	0.00000E+00	-5.97286E-01	0.00000E+00
3.60000E+00	5.73829E+00	-5.68511E+00	0.00000E+00	7.79431E-01	1.89890E-01	0.00000E+00	-1.89890E-01	0.00000E+00
3.63333E+00	5.56998E+00	-5.45958E+00	0.00000E+00	1.10345E+00	1.19297E-01	0.00000E+00	1.19297E-01	0.00000E+00
3.66667E+00	5.53585E+00	-5.25298E+00	0.00000E+00	1.74697E+00	2.29810E-01	0.00000E+00	2.29810E-01	0.00000E+00
3.70000E+00	5.58490E+00	-5.09436E+00	0.00000E+00	2.28882E+00	2.87153E-01	0.00000E+00	2.87153E-01	0.00000E+00
3.73333E+00	5.60213E+00	-4.95224E+00	0.00000E+00	2.61900E+00	3.34442E-01	0.00000E+00	3.34442E-01	0.00000E+00
3.76667E+00	5.56197E+00	-4.82252E+00	0.00000E+00	2.77107E+00	3.69260E-01	0.00000E+00	3.69260E-01	0.00000E+00
3.80000E+00	5.46242E+00	-4.70458E+00	0.00000E+00	2.77578E+00	3.90909E-01	0.00000E+00	3.90909E-01	0.00000E+00
3.83333E+00	5.26962E+00	-4.61699E+00	0.00000E+00	2.54016E+00	3.57718E-01	0.00000E+00	3.57718E-01	0.00000E+00
3.86667E+00	4.76798E+00	-4.40985E+00	0.00000E+00	1.81296E+00	1.66034E-01	0.00000E+00	1.66034E-01	0.00000E+00
3.90000E+00	4.32710E+00	-4.08675E+00	0.00000E+00	1.42205E+00	1.02441E-01	0.00000E+00	1.02441E-01	0.00000E+00
3.93333E+00	4.13661E+00	-3.91220E+00	0.00000E+00	1.34395E+00	1.55872E-01	0.00000E+00	1.55872E-01	0.00000E+00
3.96667E+00	3.97034E+00	-3.76986E+00	0.00000E+00	1.24568E+00	2.02070E-01	0.00000E+00	2.02070E-01	0.00000E+00
4.00000E+00	3.80297E+00	-3.63562E+00	0.00000E+00	1.11572E+00	2.34966E-01	0.00000E+00	2.34966E-01	0.00000E+00
4.03333E+00	3.63895E+00	-3.50907E+00	0.00000E+00	9.63513E-01	2.57031E-01	0.00000E+00	2.57031E-01	0.00000E+00
4.06667E+00	3.48484E+00	-3.39087E+00	0.00000E+00	8.03805E-01	2.72164E-01	0.00000E+00	2.72164E-01	0.00000E+00
4.10000E+00	3.34305E+00	-3.28035E+00	0.00000E+00	6.44402E-01	2.82076E-01	0.00000E+00	2.82076E-01	0.00000E+00
4.13333E+00	3.21454E+00	-3.17682E+00	0.00000E+00	4.91015E-01	2.87986E-01	0.00000E+00	2.87986E-01	0.00000E+00
4.16667E+00	3.09917E+00	-3.07952E+00	0.00000E+00	3.48375E-01	2.90968E-01	0.00000E+00	2.90968E-01	0.00000E+00

4.20000E+00	2.99599E+00	-2.98799E+00	0.00000E+00	2.18896E-01	2.91643E-01	0.00000E+00	2.91643E-01	0.00000E+00
4.23333E+00	2.90361E+00	-2.90173E+00	0.00000E+00	1.04401E-01	2.90552E-01	0.00000E+00	2.90552E-01	0.00000E+00
4.26667E+00	2.82033E+00	-2.82033E+00	0.00000E+00	5.98751E-03	2.88128E-01	0.00000E+00	2.88128E-01	0.00000E+00
4.30000E+00	2.74442E+00	-2.74337E+00	0.00000E+00	-7.59248E-02	2.84696E-01	0.00000E+00	2.84696E-01	0.00000E+00
4.33333E+00	2.67425E+00	-2.67050E+00	0.00000E+00	-1.41498E-01	2.80490E-01	0.00000E+00	2.80490E-01	0.00000E+00
4.36667E+00	2.60844E+00	-2.60141E+00	0.00000E+00	-1.91362E-01	2.75672E-01	0.00000E+00	2.75672E-01	0.00000E+00
4.40000E+00	2.54597E+00	-2.53590E+00	0.00000E+00	-2.26212E-01	2.70312E-01	0.00000E+00	2.70312E-01	0.00000E+00
4.43333E+00	2.48598E+00	-2.47364E+00	0.00000E+00	-2.47375E-01	2.64509E-01	0.00000E+00	2.64509E-01	0.00000E+00
4.46667E+00	2.42793E+00	-2.41435E+00	0.00000E+00	-2.56427E-01	2.58311E-01	0.00000E+00	2.58311E-01	0.00000E+00
4.50000E+00	2.37160E+00	-2.35784E+00	0.00000E+00	-2.55085E-01	2.51741E-01	0.00000E+00	2.51741E-01	0.00000E+00
4.53333E+00	2.31692E+00	-2.30390E+00	0.00000E+00	-2.45247E-01	2.44860E-01	0.00000E+00	2.44860E-01	0.00000E+00
4.56667E+00	2.26397E+00	-2.25238E+00	0.00000E+00	-2.28838E-01	2.37750E-01	0.00000E+00	2.37750E-01	0.00000E+00
4.60000E+00	2.21287E+00	-2.20310E+00	0.00000E+00	-2.07698E-01	2.30490E-01	0.00000E+00	2.30490E-01	0.00000E+00
4.63333E+00	2.16374E+00	-2.15594E+00	0.00000E+00	-1.83492E-01	2.23153E-01	0.00000E+00	2.23153E-01	0.00000E+00
4.66667E+00	2.11664E+00	-2.11076E+00	0.00000E+00	-1.57677E-01	2.15796E-01	0.00000E+00	2.15796E-01	0.00000E+00
4.70000E+00	2.07160E+00	-2.06743E+00	0.00000E+00	-1.31485E-01	2.08468E-01	0.00000E+00	2.08468E-01	0.00000E+00
4.73333E+00	2.02861E+00	-2.02584E+00	0.00000E+00	-1.05924E-01	2.01210E-01	0.00000E+00	2.01210E-01	0.00000E+00
4.76667E+00	1.98757E+00	-1.98589E+00	0.00000E+00	-8.17785E-02	1.94053E-01	0.00000E+00	1.94053E-01	0.00000E+00
4.80000E+00	1.94840E+00	-1.94749E+00	0.00000E+00	-5.96281E-02	1.87023E-01	0.00000E+00	1.87023E-01	0.00000E+00
4.83333E+00	1.91096E+00	-1.91054E+00	0.00000E+00	-3.99077E-02	1.80140E-01	0.00000E+00	1.80140E-01	0.00000E+00
4.86667E+00	1.87511E+00	-1.87497E+00	0.00000E+00	-2.27936E-02	1.73417E-01	0.00000E+00	1.73417E-01	0.00000E+00
4.90000E+00	1.84072E+00	-1.84070E+00	0.00000E+00	-8.37852E-03	1.66866E-01	0.00000E+00	1.66866E-01	0.00000E+00
4.93333E+00	1.80766E+00	-1.80766E+00	0.00000E+00	3.35266E-03	1.60499E-01	0.00000E+00	1.60499E-01	0.00000E+00
4.96667E+00	1.77583E+00	-1.77578E+00	0.00000E+00	1.25103E-02	1.54321E-01	0.00000E+00	1.54321E-01	0.00000E+00
5.00000E+00	1.74512E+00	-1.74501E+00	0.00000E+00	1.92775E-02	1.48336E-01	0.00000E+00	1.48336E-01	0.00000E+00
5.03333E+00	1.71546E+00	-1.71529E+00	0.00000E+00	2.38906E-02	1.42549E-01	0.00000E+00	1.42549E-01	0.00000E+00
5.06667E+00	1.68677E+00	-1.68656E+00	0.00000E+00	2.66178E-02	1.36958E-01	0.00000E+00	1.36958E-01	0.00000E+00
5.10000E+00	1.65901E+00	-1.65878E+00	0.00000E+00	2.77419E-02	1.31563E-01	0.00000E+00	1.31563E-01	0.00000E+00
5.13333E+00	1.63213E+00	-1.63190E+00	0.00000E+00	2.75470E-02	1.26363E-01	0.00000E+00	1.26363E-01	0.00000E+00
5.16667E+00	1.60609E+00	-1.60588E+00	0.00000E+00	2.63087E-02	1.21354E-01	0.00000E+00	1.21354E-01	0.00000E+00
5.20000E+00	1.58086E+00	-1.58067E+00	0.00000E+00	2.42863E-02	1.16532E-01	0.00000E+00	1.16532E-01	0.00000E+00
5.23333E+00	1.55640E+00	-1.55624E+00	0.00000E+00	2.17158E-02	1.11893E-01	0.00000E+00	1.11893E-01	0.00000E+00
5.26667E+00	1.53268E+00	-1.53256E+00	0.00000E+00	1.88053E-02	1.07432E-01	0.00000E+00	1.07432E-01	0.00000E+00
5.30000E+00	1.50967E+00	-1.50959E+00	0.00000E+00	1.57332E-02	1.03143E-01	0.00000E+00	1.03143E-01	0.00000E+00
5.33333E+00	1.48735E+00	-1.48729E+00	0.00000E+00	1.26481E-02	9.90222E-02	0.00000E+00	9.90222E-02	0.00000E+00
5.36667E+00	1.46568E+00	-1.46565E+00	0.00000E+00	9.66787E-03	9.50630E-02	0.00000E+00	9.50630E-02	0.00000E+00
5.40000E+00	1.44464E+00	-1.44462E+00	0.00000E+00	6.88620E-03	9.12600E-02	0.00000E+00	9.12600E-02	0.00000E+00
5.43333E+00	1.42420E+00	-1.42419E+00	0.00000E+00	4.36790E-03	8.76075E-02	0.00000E+00	8.76075E-02	0.00000E+00
5.46667E+00	1.40433E+00	-1.40433E+00	0.00000E+00	2.15530E-03	8.41000E-02	0.00000E+00	8.41000E-02	0.00000E+00
5.50000E+00	1.38502E+00	-1.38502E+00	0.00000E+00	2.71670E-04	8.07322E-02	0.00000E+00	8.07322E-02	0.00000E+00
5.53333E+00	1.36623E+00	-1.36623E+00	0.00000E+00	-1.27740E-03	7.74988E-02	0.00000E+00	7.74988E-02	0.00000E+00
5.56667E+00	1.34794E+00	-1.34794E+00	0.00000E+00	-2.49977E-03	7.43950E-02	0.00000E+00	7.43950E-02	0.00000E+00
5.60000E+00	1.33014E+00	-1.33014E+00	0.00000E+00	-3.41306E-03	7.14158E-02	0.00000E+00	7.14158E-02	0.00000E+00
5.63333E+00	1.31280E+00	-1.31280E+00	0.00000E+00	-4.04412E-03	6.85563E-02	0.00000E+00	6.85563E-02	0.00000E+00
5.66667E+00	1.29591E+00	-1.29590E+00	0.00000E+00	-4.42522E-03	6.58120E-02	0.00000E+00	6.58120E-02	0.00000E+00
5.70000E+00	1.27945E+00	-1.27944E+00	0.00000E+00	-4.59071E-03	6.31781E-02	0.00000E+00	6.31781E-02	0.00000E+00
5.73333E+00	1.26339E+00	-1.26339E+00	0.00000E+00	-4.57566E-03	6.06503E-02	0.00000E+00	6.06503E-02	0.00000E+00
5.76667E+00	1.24774E+00	-1.24773E+00	0.00000E+00	-4.41500E-03	5.82243E-02	0.00000E+00	5.82243E-02	0.00000E+00
5.80000E+00	1.23247E+00	-1.23246E+00	0.00000E+00	-4.14218E-03	5.58960E-02	0.00000E+00	5.58960E-02	0.00000E+00
5.83333E+00	1.21757E+00	-1.21756E+00	0.00000E+00	-3.78830E-03	5.36614E-02	0.00000E+00	5.36614E-02	0.00000E+00
5.86667E+00	1.20302E+00	-1.20302E+00	0.00000E+00	-3.38131E-03	5.15168E-02	0.00000E+00	5.15168E-02	0.00000E+00
5.90000E+00	1.18882E+00	-1.18882E+00	0.00000E+00	-2.94563E-03	4.94584E-02	0.00000E+00	4.94584E-02	0.00000E+00
5.93333E+00	1.17495E+00	-1.17495E+00	0.00000E+00	-2.50202E-03	4.74827E-02	0.00000E+00	4.74827E-02	0.00000E+00
5.96667E+00	1.16140E+00	-1.16139E+00	0.00000E+00	-2.06733E-03	4.55863E-02	0.00000E+00	4.55863E-02	0.00000E+00

6.00000E+00 1.14815E+00 -1.14815E+00 0.00000E+00 -1.65484E-03 4.37661E-02 0.00000E+00 4.37661E-02 0.00000E+00

1Boat 30 mph
Request Number 3003

Target Boat Acceleration

Acceleration of Marker 300100 relative to Marker 1003001

Time	Accm	Accx	Accy	Accz	Wmdot	Wxdot	Wydot	Wzdot
0.00000E+00	5.51117E-02	0.00000E+00	0.00000E+00	-5.51117E-02	7.55225E-07	0.00000E+00	7.55225E-07	0.00000E+00
3.33333E-02	4.32558E-02	0.00000E+00	0.00000E+00	-4.32558E-02	4.22301E-07	0.00000E+00	4.22301E-07	0.00000E+00
6.66667E-02	3.21773E-02	0.00000E+00	0.00000E+00	-3.21773E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	2.21084E-02	0.00000E+00	0.00000E+00	-2.21084E-02	2.86601E-07	0.00000E+00	2.86601E-07	0.00000E+00
1.33333E-01	1.32188E-02	0.00000E+00	0.00000E+00	-1.32188E-02	4.52020E-07	0.00000E+00	4.52020E-07	0.00000E+00
1.66667E-01	5.59783E-03	0.00000E+00	0.00000E+00	-5.59783E-03	4.72600E-07	0.00000E+00	4.72600E-07	0.00000E+00
2.00000E-01	7.27872E-04	0.00000E+00	0.00000E+00	7.27872E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	5.77930E-03	0.00000E+00	0.00000E+00	5.77930E-03	2.10207E-07	0.00000E+00	2.10207E-07	0.00000E+00
2.66667E-01	9.61574E-03	0.00000E+00	0.00000E+00	9.61574E-03	2.62844E-07	0.00000E+00	2.62844E-07	0.00000E+00
3.00000E-01	1.23372E-02	0.00000E+00	0.00000E+00	1.23372E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	1.40667E-02	0.00000E+00	0.00000E+00	1.40667E-02	3.46266E-07	0.00000E+00	3.46266E-07	0.00000E+00
3.66667E-01	1.49364E-02	0.00000E+00	0.00000E+00	1.49364E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	1.51025E-02	0.00000E+00	0.00000E+00	1.51025E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	1.46916E-02	0.00000E+00	0.00000E+00	1.46916E-02	1.34316E-07	0.00000E+00	1.34316E-07	0.00000E+00
4.66667E-01	1.38258E-02	0.00000E+00	0.00000E+00	1.38258E-02	1.20167E-07	0.00000E+00	1.20167E-07	0.00000E+00
5.00000E-01	1.26234E-02	0.00000E+00	0.00000E+00	1.26234E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	1.11881E-02	0.00000E+00	0.00000E+00	1.11881E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	9.62808E-03	0.00000E+00	0.00000E+00	9.62808E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	8.02827E-03	0.00000E+00	0.00000E+00	8.02827E-03	1.73689E-07	0.00000E+00	1.73689E-07	0.00000E+00
6.33333E-01	6.44933E-03	0.00000E+00	0.00000E+00	6.44933E-03	3.16745E-07	0.00000E+00	-3.16745E-07	0.00000E+00
6.66667E-01	4.95526E-03	0.00000E+00	0.00000E+00	4.95526E-03	2.55481E-07	0.00000E+00	2.55481E-07	0.00000E+00
7.00000E-01	3.57544E-03	0.00000E+00	0.00000E+00	3.57544E-03	2.48953E-07	0.00000E+00	2.48953E-07	0.00000E+00
7.33333E-01	2.33763E-03	0.00000E+00	0.00000E+00	2.33763E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	1.26210E-03	0.00000E+00	0.00000E+00	1.26210E-03	3.47249E-07	0.00000E+00	3.47249E-07	0.00000E+00
8.00000E-01	3.49171E-04	0.00000E+00	0.00000E+00	3.49171E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	3.93616E-04	0.00000E+00	0.00000E+00	-3.93616E-04	1.28412E-07	0.00000E+00	-1.28412E-07	0.00000E+00
8.66667E-01	9.72632E-04	0.00000E+00	0.00000E+00	-9.72632E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	1.40502E-03	0.00000E+00	0.00000E+00	-1.40502E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	1.69992E-03	0.00000E+00	0.00000E+00	-1.69992E-03	3.67091E-07	0.00000E+00	-3.67091E-07	0.00000E+00
9.66667E-01	1.87031E-03	0.00000E+00	0.00000E+00	-1.87031E-03	1.73255E-07	0.00000E+00	1.73255E-07	0.00000E+00
1.00000E+00	1.94086E-03	0.00000E+00	0.00000E+00	-1.94086E-03	3.30214E-07	0.00000E+00	3.30214E-07	0.00000E+00
1.03333E+00	1.93038E-03	0.00000E+00	0.00000E+00	-1.93038E-03	1.29661E-07	0.00000E+00	-1.29661E-07	0.00000E+00
1.06667E+00	1.84653E-03	0.00000E+00	0.00000E+00	-1.84653E-03	3.74357E-07	0.00000E+00	3.74357E-07	0.00000E+00
1.10000E+00	1.71852E-03	0.00000E+00	0.00000E+00	-1.71852E-03	2.04688E-07	0.00000E+00	-2.04688E-07	0.00000E+00
1.13333E+00	1.54806E-03	0.00000E+00	0.00000E+00	-1.54806E-03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	1.35596E-03	0.00000E+00	0.00000E+00	-1.35596E-03	1.84396E-07	0.00000E+00	1.84396E-07	0.00000E+00
1.20000E+00	1.15159E-03	0.00000E+00	0.00000E+00	-1.15159E-03	3.01155E-07	0.00000E+00	3.01155E-07	0.00000E+00
1.23333E+00	9.48663E-04	0.00000E+00	0.00000E+00	-9.48663E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	7.52571E-04	0.00000E+00	0.00000E+00	-7.52571E-04	2.69847E-07	0.00000E+00	-2.69847E-07	0.00000E+00
1.30000E+00	5.61796E-04	0.00000E+00	0.00000E+00	-5.61796E-04	1.02057E-07	0.00000E+00	1.02057E-07	0.00000E+00
1.33333E+00	3.94935E-04	0.00000E+00	0.00000E+00	-3.94935E-04	4.21844E-07	0.00000E+00	-4.21844E-07	0.00000E+00
1.36667E+00	2.42183E-04	0.00000E+00	0.00000E+00	-2.42183E-04	1.74389E-07	0.00000E+00	-1.74389E-07	0.00000E+00
1.40000E+00	1.08190E-04	0.00000E+00	0.00000E+00	-1.08190E-04	4.29944E-07	0.00000E+00	4.29944E-07	0.00000E+00
1.43333E+00	9.82752E-07	0.00000E+00	0.00000E+00	-9.82752E-07	3.29543E-07	0.00000E+00	3.29543E-07	0.00000E+00
1.46667E+00	8.08741E-05	0.00000E+00	0.00000E+00	8.08741E-05	3.12821E-07	0.00000E+00	-3.12821E-07	0.00000E+00
1.50000E+00	1.52247E-04	0.00000E+00	0.00000E+00	1.52247E-04	2.93821E-07	0.00000E+00	2.93821E-07	0.00000E+00

1.53333E+00	1.96446E-04	0.00000E+00	0.00000E+00	1.96446E-04	1.76076E-07	0.00000E+00	-1.76076E-07	0.00000E+00
1.56667E+00	2.28681E-04	0.00000E+00	0.00000E+00	2.28681E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	2.46705E-04	0.00000E+00	0.00000E+00	2.46705E-04	1.12180E-07	0.00000E+00	1.12180E-07	0.00000E+00
1.63333E+00	2.50974E-04	0.00000E+00	0.00000E+00	2.50974E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	2.45270E-04	0.00000E+00	0.00000E+00	2.45270E-04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	2.33188E-04	0.00000E+00	0.00000E+00	2.33188E-04	1.62981E-07	0.00000E+00	1.62981E-07	0.00000E+00
1.73333E+00	2.14355E-04	0.00000E+00	0.00000E+00	2.14355E-04	1.54613E-07	0.00000E+00	1.54613E-07	0.00000E+00
1.76667E+00	1.91404E-04	0.00000E+00	0.00000E+00	1.91404E-04	2.64025E-07	0.00000E+00	2.64025E-07	0.00000E+00
1.80000E+00	1.66663E-04	0.00000E+00	0.00000E+00	1.66663E-04	3.74965E-07	0.00000E+00	3.74965E-07	0.00000E+00
1.83333E+00	1.39788E-04	0.00000E+00	0.00000E+00	1.39788E-04	2.64822E-07	0.00000E+00	2.64822E-07	0.00000E+00
1.86667E+00	1.08596E-04	0.00000E+00	0.00000E+00	1.08596E-04	4.00624E-07	0.00000E+00	-4.00624E-07	0.00000E+00
1.90000E+00	8.49313E-05	0.00000E+00	0.00000E+00	8.49313E-05	1.39505E-07	0.00000E+00	-1.39505E-07	0.00000E+00
1.93333E+00	6.20776E-05	0.00000E+00	0.00000E+00	6.20776E-05	1.95881E-07	0.00000E+00	-1.95881E-07	0.00000E+00
1.96667E+00	4.14395E-05	0.00000E+00	0.00000E+00	4.14395E-05	1.56242E-07	0.00000E+00	-1.56242E-07	0.00000E+00
2.00000E+00	2.42721E-05	0.00000E+00	0.00000E+00	2.42721E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	8.58147E-06	0.00000E+00	0.00000E+00	8.58147E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	5.79213E-06	0.00000E+00	0.00000E+00	-5.79213E-06	1.26032E-07	0.00000E+00	-1.26032E-07	0.00000E+00
2.10000E+00	1.47179E-05	0.00000E+00	0.00000E+00	-1.47179E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	2.19452E-05	0.00000E+00	0.00000E+00	-2.19452E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	2.44666E-05	0.00000E+00	0.00000E+00	-2.44666E-05	3.40994E-07	0.00000E+00	3.40994E-07	0.00000E+00
2.20000E+00	3.23910E-05	0.00000E+00	0.00000E+00	-3.23910E-05	1.60118E-07	0.00000E+00	-1.60118E-07	0.00000E+00
2.23333E+00	3.27433E-05	0.00000E+00	0.00000E+00	-3.27433E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	3.31471E-05	0.00000E+00	0.00000E+00	-3.31471E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	3.08701E-05	0.00000E+00	0.00000E+00	-3.08701E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	2.84219E-05	0.00000E+00	0.00000E+00	-2.84219E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	2.86700E-05	0.00000E+00	0.00000E+00	-2.86700E-05	3.67581E-07	0.00000E+00	-3.67581E-07	0.00000E+00
2.40000E+00	2.20154E-05	0.00000E+00	0.00000E+00	-2.20154E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	1.88884E-05	0.00000E+00	0.00000E+00	-1.88884E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	1.61171E-05	0.00000E+00	0.00000E+00	-1.61171E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	1.29192E-05	0.00000E+00	0.00000E+00	-1.29192E-05	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	9.32296E-06	0.00000E+00	0.00000E+00	-9.32296E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	6.61544E-06	0.00000E+00	0.00000E+00	-6.61544E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	1.81365E-06	0.00000E+00	0.00000E+00	-1.81365E-06	2.87813E-07	0.00000E+00	2.87813E-07	0.00000E+00
2.63333E+00	5.53810E-06	0.00000E+00	0.00000E+00	-5.53810E-06	4.09740E-07	0.00000E+00	-4.09740E-07	0.00000E+00
2.66667E+00	4.91459E-07	0.00000E+00	0.00000E+00	-4.91459E-07	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	1.79368E-06	0.00000E+00	0.00000E+00	1.79368E-06	1.16514E-07	0.00000E+00	1.16514E-07	0.00000E+00
2.73333E+00	3.32186E-06	0.00000E+00	0.00000E+00	3.32186E-06	1.30195E-07	0.00000E+00	1.30195E-07	0.00000E+00
2.76667E+00	2.02646E-06	0.00000E+00	0.00000E+00	2.02646E-06	1.04621E-07	0.00000E+00	-1.04621E-07	0.00000E+00
2.80000E+00	6.06168E-06	0.00000E+00	0.00000E+00	6.06168E-06	2.80771E-07	0.00000E+00	2.80771E-07	0.00000E+00
2.83333E+00	5.42953E-06	0.00000E+00	0.00000E+00	5.42953E-06	1.59023E-07	0.00000E+00	1.59023E-07	0.00000E+00
2.86667E+00	5.70762E-06	0.00000E+00	0.00000E+00	5.70762E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	8.50373E-06	0.00000E+00	0.00000E+00	8.50373E-06	5.90961E-07	0.00000E+00	5.90961E-07	0.00000E+00
2.93333E+00	6.14531E-06	0.00000E+00	0.00000E+00	6.14531E-06	2.99228E-07	0.00000E+00	2.99228E-07	0.00000E+00
2.96667E+00	1.20423E-06	0.00000E+00	0.00000E+00	1.20423E-06	2.50340E-07	0.00000E+00	-2.50340E-07	0.00000E+00
3.00000E+00	3.62542E-06	0.00000E+00	0.00000E+00	3.62542E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	3.07048E-06	0.00000E+00	0.00000E+00	3.07048E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	2.44682E-06	0.00000E+00	0.00000E+00	2.44682E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	1.96150E-06	0.00000E+00	0.00000E+00	1.96150E-06	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	2.42422E+01	-2.14168E+01	0.00000E+00	-1.13581E+01	1.53735E+00	0.00000E+00	1.53735E+00	0.00000E+00
3.16667E+00	3.10820E+00	-2.28967E+00	0.00000E+00	2.10198E+00	2.42941E-01	0.00000E+00	-2.42941E-01	0.00000E+00
3.20000E+00	3.32123E+00	-3.14456E+00	0.00000E+00	1.06879E+00	9.43275E-02	0.00000E+00	-9.43275E-02	0.00000E+00
3.23333E+00	3.21730E+00	-3.12460E+00	0.00000E+00	7.66721E-01	5.93044E-02	0.00000E+00	-5.93044E-02	0.00000E+00
3.26667E+00	3.15045E+00	-3.08513E+00	0.00000E+00	6.38211E-01	5.05492E-02	0.00000E+00	-5.05492E-02	0.00000E+00
3.30000E+00	3.30882E+01	-2.94685E+01	0.00000E+00	-1.50477E+01	8.36591E+00	0.00000E+00	-8.36591E+00	0.00000E+00

3.33333E+00	1.54187E+02	-1.20853E+02	0.00000E+00	-9.57519E+01	4.46327E+01	0.00000E+00	-4.46327E+01	0.00000E+00
3.36667E+00	1.08012E+02	-4.44009E+01	0.00000E+00	-9.84634E+01	3.83173E+01	0.00000E+00	-3.83173E+01	0.00000E+00
3.40000E+00	3.07334E+01	5.17636E+00	0.00000E+00	3.02943E+01	9.16377E+00	0.00000E+00	9.16377E+00	0.00000E+00
3.43333E+00	5.67015E+01	1.07663E+01	0.00000E+00	5.56700E+01	1.70180E+01	0.00000E+00	1.70180E+01	0.00000E+00
3.46667E+00	5.11126E+01	9.43216E+00	0.00000E+00	5.02348E+01	1.43825E+01	0.00000E+00	1.43825E+01	0.00000E+00
3.50000E+00	4.43631E+01	8.27895E+00	0.00000E+00	4.35838E+01	1.21552E+01	0.00000E+00	1.21552E+01	0.00000E+00
3.53333E+00	2.93161E+01	5.89048E+00	0.00000E+00	2.87182E+01	1.25080E+01	0.00000E+00	1.25080E+01	0.00000E+00
3.56667E+00	1.71030E+01	3.90151E+00	0.00000E+00	1.66520E+01	1.22571E+01	0.00000E+00	1.22571E+01	0.00000E+00
3.60000E+00	5.80731E+00	3.29867E+00	0.00000E+00	4.77951E+00	1.24551E+01	0.00000E+00	1.24551E+01	0.00000E+00
3.63333E+00	1.90725E+01	8.62455E+00	0.00000E+00	1.70111E+01	5.42519E+00	0.00000E+00	5.42519E+00	0.00000E+00
3.66667E+00	1.95814E+01	5.00023E+00	0.00000E+00	1.89323E+01	2.11518E+00	0.00000E+00	2.11518E+00	0.00000E+00
3.70000E+00	1.34159E+01	4.51128E+00	0.00000E+00	1.26347E+01	1.67237E+00	0.00000E+00	1.67237E+00	0.00000E+00
3.73333E+00	8.15002E+00	4.08593E+00	0.00000E+00	7.05181E+00	1.24629E+00	0.00000E+00	1.24629E+00	0.00000E+00
3.76667E+00	4.32295E+00	3.70821E+00	0.00000E+00	2.22196E+00	8.37856E-01	0.00000E+00	8.37856E-01	0.00000E+00
3.80000E+00	3.81503E+00	3.37347E+00	0.00000E+00	-1.78160E+00	4.68198E-01	0.00000E+00	4.68198E-01	0.00000E+00
3.83333E+00	1.83583E+01	5.53908E-01	0.00000E+00	-1.83500E+01	4.63887E+00	0.00000E+00	-4.63887E+00	0.00000E+00
3.86667E+00	2.48298E+01	1.22899E+01	0.00000E+00	-2.15749E+01	5.58632E+00	0.00000E+00	-5.58632E+00	0.00000E+00
3.90000E+00	5.21656E+00	4.97541E+00	0.00000E+00	-1.56773E+00	1.87173E+00	0.00000E+00	1.87173E+00	0.00000E+00
3.93333E+00	5.34858E+00	4.55948E+00	0.00000E+00	-2.79615E+00	1.44721E+00	0.00000E+00	1.44721E+00	0.00000E+00
3.96667E+00	5.68419E+00	4.23374E+00	0.00000E+00	-3.79282E+00	1.06361E+00	0.00000E+00	1.06361E+00	0.00000E+00
4.00000E+00	5.92786E+00	3.93758E+00	0.00000E+00	-4.43114E+00	7.65767E-01	0.00000E+00	7.65767E-01	0.00000E+00
4.03333E+00	6.00468E+00	3.66824E+00	0.00000E+00	-4.75396E+00	5.40393E-01	0.00000E+00	5.40393E-01	0.00000E+00
4.06667E+00	5.92722E+00	3.42527E+00	0.00000E+00	-4.83730E+00	3.64907E-01	0.00000E+00	3.64907E-01	0.00000E+00
4.10000E+00	5.71417E+00	3.20563E+00	0.00000E+00	-4.73028E+00	2.29059E-01	0.00000E+00	2.29059E-01	0.00000E+00
4.13333E+00	5.39167E+00	3.00647E+00	0.00000E+00	-4.47563E+00	1.25090E-01	0.00000E+00	1.25090E-01	0.00000E+00
4.16667E+00	4.99391E+00	2.82514E+00	0.00000E+00	-4.11798E+00	4.55583E-02	0.00000E+00	4.55583E-02	0.00000E+00
4.20000E+00	4.54616E+00	2.65969E+00	0.00000E+00	-3.68696E+00	1.43865E-02	0.00000E+00	-1.43865E-02	0.00000E+00
4.23333E+00	4.07388E+00	2.50835E+00	0.00000E+00	-3.21010E+00	5.92099E-02	0.00000E+00	-5.92099E-02	0.00000E+00
4.26667E+00	3.60073E+00	2.36958E+00	0.00000E+00	-2.71116E+00	9.27279E-02	0.00000E+00	-9.27279E-02	0.00000E+00
4.30000E+00	3.14804E+00	2.24203E+00	0.00000E+00	-2.20986E+00	1.18080E-01	0.00000E+00	-1.18080E-01	0.00000E+00
4.33333E+00	2.73480E+00	2.12451E+00	0.00000E+00	-1.72210E+00	1.37772E-01	0.00000E+00	-1.37772E-01	0.00000E+00
4.36667E+00	2.37753E+00	2.01601E+00	0.00000E+00	-1.26031E+00	1.53749E-01	0.00000E+00	-1.53749E-01	0.00000E+00
4.40000E+00	2.08817E+00	1.91574E+00	0.00000E+00	-8.30885E-01	1.67226E-01	0.00000E+00	-1.67226E-01	0.00000E+00
4.43333E+00	1.87610E+00	1.82282E+00	0.00000E+00	-4.43898E-01	1.79517E-01	0.00000E+00	-1.79517E-01	0.00000E+00
4.46667E+00	1.73971E+00	1.73650E+00	0.00000E+00	-1.05669E-01	1.91407E-01	0.00000E+00	-1.91407E-01	0.00000E+00
4.50000E+00	1.66579E+00	1.65615E+00	0.00000E+00	1.78959E-01	2.02410E-01	0.00000E+00	-2.02410E-01	0.00000E+00
4.53333E+00	1.63196E+00	1.58125E+00	0.00000E+00	4.03660E-01	2.10476E-01	0.00000E+00	-2.10476E-01	0.00000E+00
4.56667E+00	1.61577E+00	1.51131E+00	0.00000E+00	5.71542E-01	2.15968E-01	0.00000E+00	-2.15968E-01	0.00000E+00
4.60000E+00	1.60074E+00	1.44591E+00	0.00000E+00	6.86808E-01	2.19199E-01	0.00000E+00	-2.19199E-01	0.00000E+00
4.63333E+00	1.57737E+00	1.38467E+00	0.00000E+00	7.55492E-01	2.20596E-01	0.00000E+00	-2.20596E-01	0.00000E+00
4.66667E+00	1.54151E+00	1.32724E+00	0.00000E+00	7.84026E-01	2.20422E-01	0.00000E+00	-2.20422E-01	0.00000E+00
4.70000E+00	1.49272E+00	1.27331E+00	0.00000E+00	7.79049E-01	2.18895E-01	0.00000E+00	-2.18895E-01	0.00000E+00
4.73333E+00	1.43291E+00	1.22259E+00	0.00000E+00	7.47328E-01	2.16297E-01	0.00000E+00	-2.16297E-01	0.00000E+00
4.76667E+00	1.36517E+00	1.17485E+00	0.00000E+00	6.95284E-01	2.12857E-01	0.00000E+00	-2.12857E-01	0.00000E+00
4.80000E+00	1.29303E+00	1.12985E+00	0.00000E+00	6.28784E-01	2.08760E-01	0.00000E+00	-2.08760E-01	0.00000E+00
4.83333E+00	1.22005E+00	1.08739E+00	0.00000E+00	5.53274E-01	2.04160E-01	0.00000E+00	-2.04160E-01	0.00000E+00
4.86667E+00	1.14917E+00	1.04728E+00	0.00000E+00	4.73086E-01	1.99159E-01	0.00000E+00	-1.99159E-01	0.00000E+00
4.90000E+00	1.08270E+00	1.00934E+00	0.00000E+00	3.91764E-01	1.93811E-01	0.00000E+00	-1.93811E-01	0.00000E+00
4.93333E+00	1.02236E+00	9.73431E-01	0.00000E+00	3.12493E-01	1.88210E-01	0.00000E+00	-1.88210E-01	0.00000E+00
4.96667E+00	9.69022E-01	9.39404E-01	0.00000E+00	2.37749E-01	1.82447E-01	0.00000E+00	-1.82447E-01	0.00000E+00
5.00000E+00	9.22814E-01	9.07130E-01	0.00000E+00	1.69416E-01	1.76585E-01	0.00000E+00	-1.76585E-01	0.00000E+00
5.03333E+00	8.83208E-01	8.76491E-01	0.00000E+00	1.08717E-01	1.70677E-01	0.00000E+00	-1.70677E-01	0.00000E+00
5.06667E+00	8.49249E-01	8.47378E-01	0.00000E+00	5.63399E-02	1.64772E-01	0.00000E+00	-1.64772E-01	0.00000E+00
5.10000E+00	8.19788E-01	8.19693E-01	0.00000E+00	1.25384E-02	1.58911E-01	0.00000E+00	-1.58911E-01	0.00000E+00

5.13333E+00	7.93670E-01	7.93342E-01	0.00000E+00	-2.28080E-02	1.53127E-01	0.00000E+00	-1.53127E-01	0.00000E+00
5.16667E+00	7.69873E-01	7.68242E-01	0.00000E+00	-5.01003E-02	1.47448E-01	0.00000E+00	-1.47448E-01	0.00000E+00
5.20000E+00	7.47595E-01	7.44314E-01	0.00000E+00	-6.99608E-02	1.41894E-01	0.00000E+00	-1.41894E-01	0.00000E+00
5.23333E+00	7.26263E-01	7.21487E-01	0.00000E+00	-8.31560E-02	1.36479E-01	0.00000E+00	-1.36479E-01	0.00000E+00
5.26667E+00	7.05528E-01	6.99694E-01	0.00000E+00	-9.05425E-02	1.31216E-01	0.00000E+00	-1.31216E-01	0.00000E+00
5.30000E+00	6.85218E-01	6.78874E-01	0.00000E+00	-9.30215E-02	1.26113E-01	0.00000E+00	-1.26113E-01	0.00000E+00
5.33333E+00	6.65291E-01	6.58970E-01	0.00000E+00	-9.14894E-02	1.21176E-01	0.00000E+00	-1.21176E-01	0.00000E+00
5.36667E+00	6.45788E-01	6.39928E-01	0.00000E+00	-8.67989E-02	1.16406E-01	0.00000E+00	-1.16406E-01	0.00000E+00
5.40000E+00	6.26796E-01	6.21700E-01	0.00000E+00	-7.97661E-02	1.11804E-01	0.00000E+00	-1.11804E-01	0.00000E+00
5.43333E+00	6.08410E-01	6.04240E-01	0.00000E+00	-7.11148E-02	1.07371E-01	0.00000E+00	-1.07371E-01	0.00000E+00
5.46667E+00	5.90715E-01	5.87505E-01	0.00000E+00	-6.14967E-02	1.03104E-01	0.00000E+00	-1.03104E-01	0.00000E+00
5.50000E+00	5.73769E-01	5.71456E-01	0.00000E+00	-5.14623E-02	9.89926E-02	0.00000E+00	-9.89926E-02	0.00000E+00
5.53333E+00	5.57602E-01	5.56056E-01	0.00000E+00	-4.14922E-02	9.50328E-02	0.00000E+00	-9.50328E-02	0.00000E+00
5.56667E+00	5.42210E-01	5.41270E-01	0.00000E+00	-3.19271E-02	9.12212E-02	0.00000E+00	-9.12212E-02	0.00000E+00
5.60000E+00	5.27569E-01	5.27066E-01	0.00000E+00	-2.30519E-02	8.75563E-02	0.00000E+00	-8.75563E-02	0.00000E+00
5.63333E+00	5.13634E-01	5.13413E-01	0.00000E+00	-1.50540E-02	8.40345E-02	0.00000E+00	-8.40345E-02	0.00000E+00
5.66667E+00	5.00349E-01	5.00285E-01	0.00000E+00	-8.04746E-03	8.06517E-02	0.00000E+00	-8.06517E-02	0.00000E+00
5.70000E+00	4.87658E-01	4.87653E-01	0.00000E+00	-2.08947E-03	7.74034E-02	0.00000E+00	-7.74034E-02	0.00000E+00
5.73333E+00	4.75503E-01	4.75494E-01	0.00000E+00	2.80297E-03	7.42855E-02	0.00000E+00	-7.42855E-02	0.00000E+00
5.76667E+00	4.63832E-01	4.63784E-01	0.00000E+00	6.65627E-03	7.12943E-02	0.00000E+00	-7.12943E-02	0.00000E+00
5.80000E+00	4.52603E-01	4.52502E-01	0.00000E+00	9.54325E-03	6.84234E-02	0.00000E+00	-6.84234E-02	0.00000E+00
5.83333E+00	4.41777E-01	4.41626E-01	0.00000E+00	1.15392E-02	6.56697E-02	0.00000E+00	-6.56697E-02	0.00000E+00
5.86667E+00	4.31326E-01	4.31138E-01	0.00000E+00	1.27505E-02	6.30280E-02	0.00000E+00	-6.30280E-02	0.00000E+00
5.90000E+00	4.21228E-01	4.21019E-01	0.00000E+00	1.32826E-02	6.04943E-02	0.00000E+00	-6.04943E-02	0.00000E+00
5.93333E+00	4.11465E-01	4.11252E-01	0.00000E+00	1.32480E-02	5.80643E-02	0.00000E+00	-5.80643E-02	0.00000E+00
5.96667E+00	4.02024E-01	4.01821E-01	0.00000E+00	1.27668E-02	5.57326E-02	0.00000E+00	-5.57326E-02	0.00000E+00
6.00000E+00	3.92892E-01	3.92711E-01	0.00000E+00	1.19365E-02	5.34962E-02	0.00000E+00	-5.34962E-02	0.00000E+00

1Boat 30 mph
Request Number 3004

Target Boat Forces

Force exerted on Marker 300100 by Marker 1003001

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	4.85967E+03	0.00000E+00	0.00000E+00	4.85967E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	4.85982E+03	0.00000E+00	0.00000E+00	4.85982E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	4.86024E+03	0.00000E+00	0.00000E+00	4.86024E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	4.86086E+03	0.00000E+00	0.00000E+00	4.86086E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	4.86161E+03	0.00000E+00	0.00000E+00	4.86161E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	4.86245E+03	0.00000E+00	0.00000E+00	4.86245E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	4.86334E+03	0.00000E+00	0.00000E+00	4.86334E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	4.86421E+03	0.00000E+00	0.00000E+00	4.86421E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	4.86505E+03	0.00000E+00	0.00000E+00	4.86505E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	4.86584E+03	0.00000E+00	0.00000E+00	4.86584E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	4.86654E+03	0.00000E+00	0.00000E+00	4.86654E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	4.86716E+03	0.00000E+00	0.00000E+00	4.86716E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	4.86768E+03	0.00000E+00	0.00000E+00	4.86768E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	4.86812E+03	0.00000E+00	0.00000E+00	4.86812E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	4.86846E+03	0.00000E+00	0.00000E+00	4.86846E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	4.86872E+03	0.00000E+00	0.00000E+00	4.86872E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	4.86890E+03	0.00000E+00	0.00000E+00	4.86890E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	4.86902E+03	0.00000E+00	0.00000E+00	4.86902E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	4.86907E+03	0.00000E+00	0.00000E+00	4.86907E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	4.86907E+03	0.00000E+00	0.00000E+00	4.86907E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

6.66667E-01	4.86904E+03	0.00000E+00	0.00000E+00	4.86904E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	4.86897E+03	0.00000E+00	0.00000E+00	4.86897E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	4.86888E+03	0.00000E+00	0.00000E+00	4.86888E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	4.86878E+03	0.00000E+00	0.00000E+00	4.86878E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	4.86867E+03	0.00000E+00	0.00000E+00	4.86867E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	4.86855E+03	0.00000E+00	0.00000E+00	4.86855E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	4.86844E+03	0.00000E+00	0.00000E+00	4.86844E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	4.86834E+03	0.00000E+00	0.00000E+00	4.86834E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	4.86824E+03	0.00000E+00	0.00000E+00	4.86824E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	4.86815E+03	0.00000E+00	0.00000E+00	4.86815E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	4.86808E+03	0.00000E+00	0.00000E+00	4.86808E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	4.86802E+03	0.00000E+00	0.00000E+00	4.86802E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	4.86797E+03	0.00000E+00	0.00000E+00	4.86797E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	4.86793E+03	0.00000E+00	0.00000E+00	4.86793E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	4.86790E+03	0.00000E+00	0.00000E+00	4.86790E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	4.86788E+03	0.00000E+00	0.00000E+00	4.86788E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	4.86787E+03	0.00000E+00	0.00000E+00	4.86787E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	4.86786E+03	0.00000E+00	0.00000E+00	4.86786E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	4.86786E+03	0.00000E+00	0.00000E+00	4.86786E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	4.86787E+03	0.00000E+00	0.00000E+00	4.86787E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	4.86788E+03	0.00000E+00	0.00000E+00	4.86788E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	4.86789E+03	0.00000E+00	0.00000E+00	4.86789E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	4.86791E+03	0.00000E+00	0.00000E+00	4.86791E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	4.86792E+03	0.00000E+00	0.00000E+00	4.86792E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	4.86793E+03	0.00000E+00	0.00000E+00	4.86793E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	4.86795E+03	0.00000E+00	0.00000E+00	4.86795E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	4.86796E+03	0.00000E+00	0.00000E+00	4.86796E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	4.86797E+03	0.00000E+00	0.00000E+00	4.86797E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	4.86798E+03	0.00000E+00	0.00000E+00	4.86798E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	4.86799E+03	0.00000E+00	0.00000E+00	4.86799E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	4.86802E+03	0.00000E+00	0.00000E+00	4.86802E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	4.86802E+03	0.00000E+00	0.00000E+00	4.86802E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	4.86802E+03	0.00000E+00	0.00000E+00	4.86802E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	4.86802E+03	0.00000E+00	0.00000E+00	4.86802E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	4.86802E+03	0.00000E+00	0.00000E+00	4.86802E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	4.86801E+03	0.00000E+00	0.00000E+00	4.86801E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

2.46667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	4.86800E+03	0.00000E+00	0.00000E+00	4.86800E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	4.86994E+03	0.00000E+00	0.00000E+00	4.86994E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	4.91586E+03	0.00000E+00	0.00000E+00	4.91586E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	4.95155E+03	0.00000E+00	0.00000E+00	4.95155E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	4.96092E+03	0.00000E+00	0.00000E+00	4.96092E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	4.96286E+03	0.00000E+00	0.00000E+00	4.96286E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	4.96434E+03	0.00000E+00	0.00000E+00	4.96434E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	5.11863E+03	0.00000E+00	0.00000E+00	5.11863E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	5.83344E+03	0.00000E+00	0.00000E+00	5.83344E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	7.09055E+03	0.00000E+00	0.00000E+00	7.09055E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	8.31984E+03	0.00000E+00	0.00000E+00	8.31984E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	9.25950E+03	0.00000E+00	0.00000E+00	9.25950E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	9.84862E+03	0.00000E+00	0.00000E+00	9.84862E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	1.00717E+04	0.00000E+00	0.00000E+00	1.00717E+04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	1.00651E+04	0.00000E+00	0.00000E+00	1.00651E+04	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	9.94010E+03	0.00000E+00	0.00000E+00	9.94010E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	9.75752E+03	0.00000E+00	0.00000E+00	9.75752E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	9.47715E+03	0.00000E+00	0.00000E+00	9.47715E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	9.06692E+03	0.00000E+00	0.00000E+00	9.06692E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	8.55310E+03	0.00000E+00	0.00000E+00	8.55310E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	7.97499E+03	0.00000E+00	0.00000E+00	7.97499E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	7.37444E+03	0.00000E+00	0.00000E+00	7.37444E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	6.80886E+03	0.00000E+00	0.00000E+00	6.80886E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	6.36394E+03	0.00000E+00	0.00000E+00	6.36394E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	6.05304E+03	0.00000E+00	0.00000E+00	6.05304E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	5.78922E+03	0.00000E+00	0.00000E+00	5.78922E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	5.54028E+03	0.00000E+00	0.00000E+00	5.54028E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	5.31382E+03	0.00000E+00	0.00000E+00	5.31382E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	5.11281E+03	0.00000E+00	0.00000E+00	5.11281E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	4.94050E+03	0.00000E+00	0.00000E+00	4.94050E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	4.79728E+03	0.00000E+00	0.00000E+00	4.79728E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	4.68239E+03	0.00000E+00	0.00000E+00	4.68239E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	4.59382E+03	0.00000E+00	0.00000E+00	4.59382E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	4.52950E+03	0.00000E+00	0.00000E+00	4.52950E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	4.48710E+03	0.00000E+00	0.00000E+00	4.48710E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

4.26667E+00	4.46411E+03	0.00000E+00	0.00000E+00	4.46411E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	4.45799E+03	0.00000E+00	0.00000E+00	4.45799E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	4.46616E+03	0.00000E+00	0.00000E+00	4.46616E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	4.48610E+03	0.00000E+00	0.00000E+00	4.48610E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	4.51617E+03	0.00000E+00	0.00000E+00	4.51617E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	4.55352E+03	0.00000E+00	0.00000E+00	4.55352E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	4.59560E+03	0.00000E+00	0.00000E+00	4.59560E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	4.63997E+03	0.00000E+00	0.00000E+00	4.63997E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	4.68378E+03	0.00000E+00	0.00000E+00	4.68378E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	4.72557E+03	0.00000E+00	0.00000E+00	4.72557E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	4.76413E+03	0.00000E+00	0.00000E+00	4.76413E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	4.79872E+03	0.00000E+00	0.00000E+00	4.79872E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	4.82885E+03	0.00000E+00	0.00000E+00	4.82885E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	4.85429E+03	0.00000E+00	0.00000E+00	4.85429E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	4.87506E+03	0.00000E+00	0.00000E+00	4.87506E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	4.89133E+03	0.00000E+00	0.00000E+00	4.89133E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	4.90343E+03	0.00000E+00	0.00000E+00	4.90343E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	4.91174E+03	0.00000E+00	0.00000E+00	4.91174E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	4.91673E+03	0.00000E+00	0.00000E+00	4.91673E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	4.91885E+03	0.00000E+00	0.00000E+00	4.91885E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	4.91860E+03	0.00000E+00	0.00000E+00	4.91860E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	4.91645E+03	0.00000E+00	0.00000E+00	4.91645E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	4.91289E+03	0.00000E+00	0.00000E+00	4.91289E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	4.90833E+03	0.00000E+00	0.00000E+00	4.90833E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	4.90314E+03	0.00000E+00	0.00000E+00	4.90314E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	4.89764E+03	0.00000E+00	0.00000E+00	4.89764E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	4.89210E+03	0.00000E+00	0.00000E+00	4.89210E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	4.88673E+03	0.00000E+00	0.00000E+00	4.88673E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	4.88171E+03	0.00000E+00	0.00000E+00	4.88171E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	4.87714E+03	0.00000E+00	0.00000E+00	4.87714E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	4.87312E+03	0.00000E+00	0.00000E+00	4.87312E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	4.86967E+03	0.00000E+00	0.00000E+00	4.86967E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	4.86682E+03	0.00000E+00	0.00000E+00	4.86682E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	4.86455E+03	0.00000E+00	0.00000E+00	4.86455E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	4.86283E+03	0.00000E+00	0.00000E+00	4.86283E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	4.86162E+03	0.00000E+00	0.00000E+00	4.86162E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	4.86086E+03	0.00000E+00	0.00000E+00	4.86086E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	4.86049E+03	0.00000E+00	0.00000E+00	4.86049E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	4.86045E+03	0.00000E+00	0.00000E+00	4.86045E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	4.86067E+03	0.00000E+00	0.00000E+00	4.86067E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	4.86110E+03	0.00000E+00	0.00000E+00	4.86110E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	4.86168E+03	0.00000E+00	0.00000E+00	4.86168E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	4.86236E+03	0.00000E+00	0.00000E+00	4.86236E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	4.86309E+03	0.00000E+00	0.00000E+00	4.86309E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	4.86385E+03	0.00000E+00	0.00000E+00	4.86385E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	4.86459E+03	0.00000E+00	0.00000E+00	4.86459E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	4.86530E+03	0.00000E+00	0.00000E+00	4.86530E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	4.86596E+03	0.00000E+00	0.00000E+00	4.86596E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	4.86655E+03	0.00000E+00	0.00000E+00	4.86655E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	4.86706E+03	0.00000E+00	0.00000E+00	4.86706E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	4.86750E+03	0.00000E+00	0.00000E+00	4.86750E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	4.86786E+03	0.00000E+00	0.00000E+00	4.86786E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	4.86815E+03	0.00000E+00	0.00000E+00	4.86815E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 32011

port gunwale

Displacement of Marker 20001 relative to Marker 3200

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	1.38258E+02	1.38246E+02	0.00000E+00	1.85000E+00	0.00000E+00	0.00000E+00	9.00000E+01
3.33333E-02	1.36795E+02	1.36782E+02	0.00000E+00	1.86258E+00	0.00000E+00	-4.79338E-02	9.00000E+01
6.66667E-02	1.35334E+02	1.35321E+02	0.00000E+00	1.89230E+00	0.00000E+00	-1.55993E-01	9.00000E+01
1.00000E-01	1.33876E+02	1.33862E+02	0.00000E+00	1.93158E+00	0.00000E+00	-2.92789E-01	9.00000E+01
1.33333E-01	1.32418E+02	1.32403E+02	0.00000E+00	1.97548E+00	0.00000E+00	-4.40091E-01	9.00000E+01
1.66667E-01	1.30960E+02	1.30945E+02	0.00000E+00	2.02092E+00	0.00000E+00	-5.88407E-01	9.00000E+01
2.00000E-01	1.29503E+02	1.29486E+02	0.00000E+00	2.06604E+00	0.00000E+00	-7.33209E-01	9.00000E+01
2.33333E-01	1.28044E+02	1.28027E+02	0.00000E+00	2.10917E+00	0.00000E+00	-8.71037E-01	9.00000E+01
2.66667E-01	1.26586E+02	1.26568E+02	0.00000E+00	2.14945E+00	0.00000E+00	-1.00100E+00	9.00000E+01
3.00000E-01	1.25127E+02	1.25108E+02	0.00000E+00	2.18647E+00	0.00000E+00	-1.12335E+00	9.00000E+01
3.33333E-01	1.23668E+02	1.23648E+02	0.00000E+00	2.22004E+00	0.00000E+00	-1.23864E+00	9.00000E+01
3.66667E-01	1.22208E+02	1.22188E+02	0.00000E+00	2.25020E+00	0.00000E+00	-1.34755E+00	9.00000E+01
4.00000E-01	1.20748E+02	1.20727E+02	0.00000E+00	2.27706E+00	0.00000E+00	-1.45068E+00	9.00000E+01
4.33333E-01	1.19288E+02	1.19266E+02	0.00000E+00	2.30079E+00	0.00000E+00	-1.54857E+00	9.00000E+01
4.66667E-01	1.17828E+02	1.17805E+02	0.00000E+00	2.32163E+00	0.00000E+00	-1.64181E+00	9.00000E+01
5.00000E-01	1.16367E+02	1.16343E+02	0.00000E+00	2.33987E+00	0.00000E+00	-1.73090E+00	9.00000E+01
5.33333E-01	1.14906E+02	1.14882E+02	0.00000E+00	2.35580E+00	0.00000E+00	-1.81631E+00	9.00000E+01
5.66667E-01	1.13445E+02	1.13420E+02	0.00000E+00	2.36976E+00	0.00000E+00	-1.89852E+00	9.00000E+01
6.00000E-01	1.11983E+02	1.11958E+02	0.00000E+00	2.38208E+00	0.00000E+00	-1.97793E+00	9.00000E+01
6.33333E-01	1.10522E+02	1.10496E+02	0.00000E+00	2.39304E+00	0.00000E+00	-2.05485E+00	9.00000E+01
6.66667E-01	1.09060E+02	1.09034E+02	0.00000E+00	2.40293E+00	0.00000E+00	-2.12954E+00	9.00000E+01
7.00000E-01	1.07599E+02	1.07572E+02	0.00000E+00	2.41199E+00	0.00000E+00	-2.20222E+00	9.00000E+01
7.33333E-01	1.06137E+02	1.06109E+02	0.00000E+00	2.42043E+00	0.00000E+00	-2.27306E+00	9.00000E+01
7.66667E-01	1.04675E+02	1.04647E+02	0.00000E+00	2.42843E+00	0.00000E+00	-2.34219E+00	9.00000E+01
8.00000E-01	1.03213E+02	1.03184E+02	0.00000E+00	2.43615E+00	0.00000E+00	-2.40972E+00	9.00000E+01
8.33333E-01	1.01751E+02	1.01722E+02	0.00000E+00	2.44371E+00	0.00000E+00	-2.47572E+00	9.00000E+01
8.66667E-01	1.00289E+02	1.00259E+02	0.00000E+00	2.45119E+00	0.00000E+00	-2.54026E+00	9.00000E+01
9.00000E-01	9.88269E+01	9.87964E+01	0.00000E+00	2.45868E+00	0.00000E+00	-2.60337E+00	9.00000E+01
9.33333E-01	9.73648E+01	9.73335E+01	0.00000E+00	2.46620E+00	0.00000E+00	-2.66508E+00	9.00000E+01
9.66667E-01	9.59025E+01	9.58706E+01	0.00000E+00	2.47379E+00	0.00000E+00	-2.72539E+00	9.00000E+01
1.00000E+00	9.44403E+01	9.44077E+01	0.00000E+00	2.48146E+00	0.00000E+00	-2.78433E+00	9.00000E+01
1.03333E+00	9.29779E+01	9.29446E+01	0.00000E+00	2.48906E+00	0.00000E+00	-2.84191E+00	9.00000E+01
1.06667E+00	9.15155E+01	9.14815E+01	0.00000E+00	2.49631E+00	0.00000E+00	-2.89813E+00	9.00000E+01
1.10000E+00	9.00531E+01	9.00183E+01	0.00000E+00	2.50303E+00	0.00000E+00	-2.95303E+00	9.00000E+01
1.13333E+00	8.85906E+01	8.85550E+01	0.00000E+00	2.50926E+00	0.00000E+00	-3.00668E+00	9.00000E+01
1.16667E+00	8.71280E+01	8.70917E+01	0.00000E+00	2.51511E+00	0.00000E+00	-3.05912E+00	9.00000E+01
1.20000E+00	8.56654E+01	8.56283E+01	0.00000E+00	2.52073E+00	0.00000E+00	-3.11043E+00	9.00000E+01
1.23333E+00	8.42027E+01	8.41648E+01	0.00000E+00	2.52626E+00	0.00000E+00	-3.16066E+00	9.00000E+01
1.26667E+00	8.27401E+01	8.27013E+01	0.00000E+00	2.53180E+00	0.00000E+00	-3.20984E+00	9.00000E+01
1.30000E+00	8.12774E+01	8.12377E+01	0.00000E+00	2.53746E+00	0.00000E+00	-3.25799E+00	9.00000E+01
1.33333E+00	7.98146E+01	7.97741E+01	0.00000E+00	2.54333E+00	0.00000E+00	-3.30512E+00	9.00000E+01
1.36667E+00	7.83519E+01	7.83104E+01	0.00000E+00	2.54946E+00	0.00000E+00	-3.35123E+00	9.00000E+01
1.40000E+00	7.68892E+01	7.68467E+01	0.00000E+00	2.55590E+00	0.00000E+00	-3.39629E+00	9.00000E+01
1.43333E+00	7.54264E+01	7.53829E+01	0.00000E+00	2.56269E+00	0.00000E+00	-3.44030E+00	9.00000E+01
1.46667E+00	7.39636E+01	7.39190E+01	0.00000E+00	2.56983E+00	0.00000E+00	-3.48321E+00	9.00000E+01
1.50000E+00	7.25009E+01	7.24550E+01	0.00000E+00	2.57731E+00	0.00000E+00	-3.52500E+00	9.00000E+01
1.53333E+00	7.10381E+01	7.09910E+01	0.00000E+00	2.58509E+00	0.00000E+00	-3.56565E+00	9.00000E+01
1.56667E+00	6.95753E+01	6.95269E+01	0.00000E+00	2.59313E+00	0.00000E+00	-3.60512E+00	9.00000E+01

1.60000E+00	6.81125E+01	6.80628E+01	0.00000E+00	2.60135E+00	0.00000E+00	-3.64340E+00	9.00000E+01
1.63333E+00	6.66496E+01	6.65985E+01	0.00000E+00	2.60970E+00	0.00000E+00	-3.68047E+00	9.00000E+01
1.66667E+00	6.51868E+01	6.51342E+01	0.00000E+00	2.61806E+00	0.00000E+00	-3.71633E+00	9.00000E+01
1.70000E+00	6.37240E+01	6.36698E+01	0.00000E+00	2.62636E+00	0.00000E+00	-3.75098E+00	9.00000E+01
1.73333E+00	6.22611E+01	6.22054E+01	0.00000E+00	2.63449E+00	0.00000E+00	-3.78444E+00	9.00000E+01
1.76667E+00	6.07983E+01	6.07409E+01	0.00000E+00	2.64236E+00	0.00000E+00	-3.81673E+00	9.00000E+01
1.80000E+00	5.93354E+01	5.92762E+01	0.00000E+00	2.64989E+00	0.00000E+00	-3.84788E+00	9.00000E+01
1.83333E+00	5.78726E+01	5.78116E+01	0.00000E+00	2.65698E+00	0.00000E+00	-3.87795E+00	9.00000E+01
1.86667E+00	5.64098E+01	5.63468E+01	0.00000E+00	2.66357E+00	0.00000E+00	-3.90697E+00	9.00000E+01
1.90000E+00	5.49469E+01	5.48820E+01	0.00000E+00	2.66961E+00	0.00000E+00	-3.93503E+00	9.00000E+01
1.93333E+00	5.34841E+01	5.34172E+01	0.00000E+00	2.67505E+00	0.00000E+00	-3.96217E+00	9.00000E+01
1.96667E+00	5.20213E+01	5.19523E+01	0.00000E+00	2.67987E+00	0.00000E+00	-3.98847E+00	9.00000E+01
2.00000E+00	5.05586E+01	5.04873E+01	0.00000E+00	2.68406E+00	0.00000E+00	-4.01399E+00	9.00000E+01
2.03333E+00	4.90959E+01	4.90223E+01	0.00000E+00	2.68764E+00	0.00000E+00	-4.03876E+00	9.00000E+01
2.06667E+00	4.76333E+01	4.75572E+01	0.00000E+00	2.69062E+00	0.00000E+00	-4.06286E+00	9.00000E+01
2.10000E+00	4.61707E+01	4.60921E+01	0.00000E+00	2.69307E+00	0.00000E+00	-4.08635E+00	9.00000E+01
2.13333E+00	4.47083E+01	4.46270E+01	0.00000E+00	2.69503E+00	0.00000E+00	-4.10931E+00	9.00000E+01
2.16667E+00	4.32460E+01	4.31619E+01	0.00000E+00	2.69660E+00	0.00000E+00	-4.13180E+00	9.00000E+01
2.20000E+00	4.17839E+01	4.16967E+01	0.00000E+00	2.69786E+00	0.00000E+00	-4.15388E+00	9.00000E+01
2.23333E+00	4.03219E+01	4.02315E+01	0.00000E+00	2.69891E+00	0.00000E+00	-4.17560E+00	9.00000E+01
2.26667E+00	3.88601E+01	3.87662E+01	0.00000E+00	2.69986E+00	0.00000E+00	-4.19700E+00	9.00000E+01
2.30000E+00	3.73987E+01	3.73010E+01	0.00000E+00	2.70079E+00	0.00000E+00	-4.21811E+00	9.00000E+01
2.33333E+00	3.59374E+01	3.58357E+01	0.00000E+00	2.70180E+00	0.00000E+00	-4.23894E+00	9.00000E+01
2.36667E+00	3.44766E+01	3.43705E+01	0.00000E+00	2.70299E+00	0.00000E+00	-4.25949E+00	9.00000E+01
2.40000E+00	3.30161E+01	3.29052E+01	0.00000E+00	2.70444E+00	0.00000E+00	-4.27976E+00	9.00000E+01
2.43333E+00	3.15561E+01	3.14399E+01	0.00000E+00	2.70621E+00	0.00000E+00	-4.29972E+00	9.00000E+01
2.46667E+00	3.00966E+01	2.99745E+01	0.00000E+00	2.70834E+00	0.00000E+00	-4.31935E+00	9.00000E+01
2.50000E+00	2.86378E+01	2.85092E+01	0.00000E+00	2.71088E+00	0.00000E+00	-4.33862E+00	9.00000E+01
2.53333E+00	2.71796E+01	2.70438E+01	0.00000E+00	2.71383E+00	0.00000E+00	-4.35748E+00	9.00000E+01
2.56667E+00	2.57223E+01	2.55784E+01	0.00000E+00	2.71718E+00	0.00000E+00	-4.37589E+00	9.00000E+01
2.60000E+00	2.42659E+01	2.41129E+01	0.00000E+00	2.72091E+00	0.00000E+00	-4.39380E+00	9.00000E+01
2.63333E+00	2.28108E+01	2.26474E+01	0.00000E+00	2.72498E+00	0.00000E+00	-4.41118E+00	9.00000E+01
2.66667E+00	2.13570E+01	2.11819E+01	0.00000E+00	2.72934E+00	0.00000E+00	-4.42798E+00	9.00000E+01
2.70000E+00	1.99050E+01	1.97163E+01	0.00000E+00	2.73392E+00	0.00000E+00	-4.44419E+00	9.00000E+01
2.73333E+00	1.84551E+01	1.82507E+01	0.00000E+00	2.73863E+00	0.00000E+00	-4.45975E+00	9.00000E+01
2.76667E+00	1.70078E+01	1.67851E+01	0.00000E+00	2.74340E+00	0.00000E+00	-4.47468E+00	9.00000E+01
2.80000E+00	1.55639E+01	1.53194E+01	0.00000E+00	2.74812E+00	0.00000E+00	-4.48894E+00	9.00000E+01
2.83333E+00	1.41245E+01	1.38537E+01	0.00000E+00	2.75271E+00	0.00000E+00	-4.50255E+00	9.00000E+01
2.86667E+00	1.26910E+01	1.23879E+01	0.00000E+00	2.75708E+00	0.00000E+00	-4.51553E+00	9.00000E+01
2.90000E+00	1.12657E+01	1.09221E+01	0.00000E+00	2.76115E+00	0.00000E+00	-4.52788E+00	9.00000E+01
2.93333E+00	9.85212E+00	9.45621E+00	0.00000E+00	2.76485E+00	0.00000E+00	-4.53965E+00	9.00000E+01
2.96667E+00	8.45621E+00	7.99031E+00	0.00000E+00	2.76812E+00	0.00000E+00	-4.55087E+00	9.00000E+01
3.00000E+00	7.08840E+00	6.52438E+00	0.00000E+00	2.77092E+00	0.00000E+00	-4.56159E+00	9.00000E+01
3.03333E+00	5.76873E+00	5.05842E+00	0.00000E+00	2.77320E+00	0.00000E+00	-4.57187E+00	9.00000E+01
3.06667E+00	4.53939E+00	3.59243E+00	0.00000E+00	2.77497E+00	0.00000E+00	-4.58176E+00	9.00000E+01
3.10000E+00	3.49702E+00	2.12642E+00	0.00000E+00	2.77623E+00	0.00000E+00	-4.59133E+00	9.00000E+01
3.13333E+00	2.85721E+00	6.62362E-01	0.00000E+00	2.77937E+00	0.00000E+00	-4.60579E+00	9.00000E+01
3.16667E+00	2.93126E+00	-7.58942E-01	0.00000E+00	2.83131E+00	0.00000E+00	-4.71147E+00	9.00000E+01
3.20000E+00	3.59922E+00	-2.18031E+00	0.00000E+00	2.86368E+00	0.00000E+00	-4.74291E+00	9.00000E+01
3.23333E+00	4.61145E+00	-3.61242E+00	0.00000E+00	2.86635E+00	0.00000E+00	-4.70954E+00	9.00000E+01
3.26667E+00	5.79666E+00	-5.03869E+00	0.00000E+00	2.86581E+00	0.00000E+00	-4.68547E+00	9.00000E+01
3.30000E+00	7.06216E+00	-6.45398E+00	0.00000E+00	2.86709E+00	0.00000E+00	-4.70092E+00	9.00000E+01
3.33333E+00	8.27250E+00	-7.71936E+00	0.00000E+00	2.97419E+00	0.00000E+00	-6.03910E+00	9.00000E+01
3.36667E+00	9.25055E+00	-8.60199E+00	0.00000E+00	3.40271E+00	0.00000E+00	-1.12162E+01	9.00000E+01

3.40000E+00	1.00743E+01	-9.23124E+00	0.00000E+00	4.03442E+00	0.00000E+00	-1.89897E+01	9.00000E+01
3.43333E+00	1.08751E+01	-9.88152E+00	0.00000E+00	4.54137E+00	0.00000E+00	-2.56629E+01	9.00000E+01
3.46667E+00	1.16946E+01	-1.06262E+01	0.00000E+00	4.88336E+00	0.00000E+00	-3.04751E+01	9.00000E+01
3.50000E+00	1.25348E+01	-1.14422E+01	0.00000E+00	5.11843E+00	0.00000E+00	-3.39278E+01	9.00000E+01
3.53333E+00	1.33962E+01	-1.23110E+01	0.00000E+00	5.28185E+00	0.00000E+00	-3.63619E+01	9.00000E+01
3.56667E+00	1.42861E+01	-1.32259E+01	0.00000E+00	5.40064E+00	0.00000E+00	-3.78797E+01	9.00000E+01
3.60000E+00	1.52119E+01	-1.41832E+01	0.00000E+00	5.49880E+00	0.00000E+00	-3.85228E+01	9.00000E+01
3.63333E+00	1.61766E+01	-1.51798E+01	0.00000E+00	5.59078E+00	0.00000E+00	-3.83880E+01	9.00000E+01
3.66667E+00	1.71591E+01	-1.61974E+01	0.00000E+00	5.66404E+00	0.00000E+00	-3.78771E+01	9.00000E+01
3.70000E+00	1.81373E+01	-1.72176E+01	0.00000E+00	5.70235E+00	0.00000E+00	-3.72916E+01	9.00000E+01
3.73333E+00	1.91094E+01	-1.82389E+01	0.00000E+00	5.70189E+00	0.00000E+00	-3.66581E+01	9.00000E+01
3.76667E+00	2.00782E+01	-1.92625E+01	0.00000E+00	5.66472E+00	0.00000E+00	-3.59659E+01	9.00000E+01
3.80000E+00	2.10449E+01	-2.02878E+01	0.00000E+00	5.59376E+00	0.00000E+00	-3.52284E+01	9.00000E+01
3.83333E+00	2.20093E+01	-2.13133E+01	0.00000E+00	5.49122E+00	0.00000E+00	-3.44785E+01	9.00000E+01
3.86667E+00	2.29712E+01	-2.23377E+01	0.00000E+00	5.35735E+00	0.00000E+00	-3.38717E+01	9.00000E+01
3.90000E+00	2.39405E+01	-2.33686E+01	0.00000E+00	5.20163E+00	0.00000E+00	-3.34803E+01	9.00000E+01
3.93333E+00	2.49191E+01	-2.44058E+01	0.00000E+00	5.03207E+00	0.00000E+00	-3.31383E+01	9.00000E+01
3.96667E+00	2.59046E+01	-2.54476E+01	0.00000E+00	4.84449E+00	0.00000E+00	-3.27476E+01	9.00000E+01
4.00000E+00	2.68969E+01	-2.64948E+01	0.00000E+00	4.63351E+00	0.00000E+00	-3.23045E+01	9.00000E+01
4.03333E+00	2.78993E+01	-2.75475E+01	0.00000E+00	4.41601E+00	0.00000E+00	-3.18137E+01	9.00000E+01
4.06667E+00	2.89143E+01	-2.86060E+01	0.00000E+00	4.21077E+00	0.00000E+00	-3.12828E+01	9.00000E+01
4.10000E+00	2.99412E+01	-2.96699E+01	0.00000E+00	4.02111E+00	0.00000E+00	-3.07180E+01	9.00000E+01
4.13333E+00	3.09787E+01	-3.07389E+01	0.00000E+00	3.84673E+00	0.00000E+00	-3.01251E+01	9.00000E+01
4.16667E+00	3.20255E+01	-3.18126E+01	0.00000E+00	3.68708E+00	0.00000E+00	-2.95104E+01	9.00000E+01
4.20000E+00	3.30806E+01	-3.28904E+01	0.00000E+00	3.54195E+00	0.00000E+00	-2.88785E+01	9.00000E+01
4.23333E+00	3.41429E+01	-3.39721E+01	0.00000E+00	3.41129E+00	0.00000E+00	-2.82344E+01	9.00000E+01
4.26667E+00	3.52116E+01	-3.50571E+01	0.00000E+00	3.29509E+00	0.00000E+00	-2.75827E+01	9.00000E+01
4.30000E+00	3.62858E+01	-3.61450E+01	0.00000E+00	3.19335E+00	0.00000E+00	-2.69281E+01	9.00000E+01
4.33333E+00	3.73647E+01	-3.72354E+01	0.00000E+00	3.10599E+00	0.00000E+00	-2.62745E+01	9.00000E+01
4.36667E+00	3.84476E+01	-3.83278E+01	0.00000E+00	3.03274E+00	0.00000E+00	-2.56258E+01	9.00000E+01
4.40000E+00	3.95340E+01	-3.94221E+01	0.00000E+00	2.97330E+00	0.00000E+00	-2.49842E+01	9.00000E+01
4.43333E+00	4.06234E+01	-4.05178E+01	0.00000E+00	2.92699E+00	0.00000E+00	-2.43532E+01	9.00000E+01
4.46667E+00	4.17152E+01	-4.16148E+01	0.00000E+00	2.89288E+00	0.00000E+00	-2.37353E+01	9.00000E+01
4.50000E+00	4.28090E+01	-4.27127E+01	0.00000E+00	2.86982E+00	0.00000E+00	-2.31320E+01	9.00000E+01
4.53333E+00	4.39046E+01	-4.38116E+01	0.00000E+00	2.85653E+00	0.00000E+00	-2.25444E+01	9.00000E+01
4.56667E+00	4.50017E+01	-4.49112E+01	0.00000E+00	2.85166E+00	0.00000E+00	-2.19731E+01	9.00000E+01
4.60000E+00	4.61000E+01	-4.60116E+01	0.00000E+00	2.85383E+00	0.00000E+00	-2.14184E+01	9.00000E+01
4.63333E+00	4.71995E+01	-4.71127E+01	0.00000E+00	2.86172E+00	0.00000E+00	-2.08805E+01	9.00000E+01
4.66667E+00	4.83000E+01	-4.82144E+01	0.00000E+00	2.87403E+00	0.00000E+00	-2.03591E+01	9.00000E+01
4.70000E+00	4.94014E+01	-4.93168E+01	0.00000E+00	2.88957E+00	0.00000E+00	-1.98540E+01	9.00000E+01
4.73333E+00	5.05035E+01	-5.04198E+01	0.00000E+00	2.90728E+00	0.00000E+00	-1.93648E+01	9.00000E+01
4.76667E+00	5.16064E+01	-5.15234E+01	0.00000E+00	2.92623E+00	0.00000E+00	-1.88911E+01	9.00000E+01
4.80000E+00	5.27099E+01	-5.26276E+01	0.00000E+00	2.94563E+00	0.00000E+00	-1.84325E+01	9.00000E+01
4.83333E+00	5.38141E+01	-5.37323E+01	0.00000E+00	2.96479E+00	0.00000E+00	-1.79885E+01	9.00000E+01
4.86667E+00	5.49187E+01	-5.48377E+01	0.00000E+00	2.98322E+00	0.00000E+00	-1.75589E+01	9.00000E+01
4.90000E+00	5.60240E+01	-5.59435E+01	0.00000E+00	3.00052E+00	0.00000E+00	-1.71432E+01	9.00000E+01
4.93333E+00	5.71297E+01	-5.70500E+01	0.00000E+00	3.01640E+00	0.00000E+00	-1.67410E+01	9.00000E+01
4.96667E+00	5.82358E+01	-5.81569E+01	0.00000E+00	3.03067E+00	0.00000E+00	-1.63519E+01	9.00000E+01
5.00000E+00	5.93424E+01	-5.92643E+01	0.00000E+00	3.04321E+00	0.00000E+00	-1.59756E+01	9.00000E+01
5.03333E+00	6.04495E+01	-6.03723E+01	0.00000E+00	3.05398E+00	0.00000E+00	-1.56116E+01	9.00000E+01
5.06667E+00	6.15569E+01	-6.14807E+01	0.00000E+00	3.06300E+00	0.00000E+00	-1.52598E+01	9.00000E+01
5.10000E+00	6.26648E+01	-6.25895E+01	0.00000E+00	3.07032E+00	0.00000E+00	-1.49196E+01	9.00000E+01
5.13333E+00	6.37731E+01	-6.36988E+01	0.00000E+00	3.07604E+00	0.00000E+00	-1.45907E+01	9.00000E+01
5.16667E+00	6.48817E+01	-6.48086E+01	0.00000E+00	3.08029E+00	0.00000E+00	-1.42729E+01	9.00000E+01

5.20000E+00	6.59908E+01	-6.59187E+01	0.00000E+00	3.08318E+00	0.00000E+00	-1.39657E+01	9.00000E+01
5.23333E+00	6.71002E+01	-6.70293E+01	0.00000E+00	3.08488E+00	0.00000E+00	-1.36689E+01	9.00000E+01
5.26667E+00	6.82101E+01	-6.81402E+01	0.00000E+00	3.08553E+00	0.00000E+00	-1.33822E+01	9.00000E+01
5.30000E+00	6.93203E+01	-6.92516E+01	0.00000E+00	3.08528E+00	0.00000E+00	-1.31051E+01	9.00000E+01
5.33333E+00	7.04309E+01	-7.03633E+01	0.00000E+00	3.08426E+00	0.00000E+00	-1.28375E+01	9.00000E+01
5.36667E+00	7.15418E+01	-7.14754E+01	0.00000E+00	3.08261E+00	0.00000E+00	-1.25790E+01	9.00000E+01
5.40000E+00	7.26531E+01	-7.25878E+01	0.00000E+00	3.08045E+00	0.00000E+00	-1.23294E+01	9.00000E+01
5.43333E+00	7.37648E+01	-7.37006E+01	0.00000E+00	3.07790E+00	0.00000E+00	-1.20883E+01	9.00000E+01
5.46667E+00	7.48769E+01	-7.48137E+01	0.00000E+00	3.07505E+00	0.00000E+00	-1.18555E+01	9.00000E+01
5.50000E+00	7.59893E+01	-7.59271E+01	0.00000E+00	3.07199E+00	0.00000E+00	-1.16308E+01	9.00000E+01
5.53333E+00	7.71020E+01	-7.70409E+01	0.00000E+00	3.06879E+00	0.00000E+00	-1.14138E+01	9.00000E+01
5.56667E+00	7.82151E+01	-7.81550E+01	0.00000E+00	3.06551E+00	0.00000E+00	-1.12043E+01	9.00000E+01
5.60000E+00	7.93285E+01	-7.92694E+01	0.00000E+00	3.06221E+00	0.00000E+00	-1.10020E+01	9.00000E+01
5.63333E+00	8.04422E+01	-8.03841E+01	0.00000E+00	3.05891E+00	0.00000E+00	-1.08068E+01	9.00000E+01
5.66667E+00	8.15563E+01	-8.14991E+01	0.00000E+00	3.05566E+00	0.00000E+00	-1.06183E+01	9.00000E+01
5.70000E+00	8.26707E+01	-8.26143E+01	0.00000E+00	3.05247E+00	0.00000E+00	-1.04363E+01	9.00000E+01
5.73333E+00	8.37854E+01	-8.37299E+01	0.00000E+00	3.04935E+00	0.00000E+00	-1.02606E+01	9.00000E+01
5.76667E+00	8.49005E+01	-8.48458E+01	0.00000E+00	3.04631E+00	0.00000E+00	-1.00910E+01	9.00000E+01
5.80000E+00	8.60158E+01	-8.59619E+01	0.00000E+00	3.04336E+00	0.00000E+00	-9.92719E+00	9.00000E+01
5.83333E+00	8.71314E+01	-8.70784E+01	0.00000E+00	3.04049E+00	0.00000E+00	-9.76904E+00	9.00000E+01
5.86667E+00	8.82474E+01	-8.81951E+01	0.00000E+00	3.03770E+00	0.00000E+00	-9.61633E+00	9.00000E+01
5.90000E+00	8.93636E+01	-8.93120E+01	0.00000E+00	3.03497E+00	0.00000E+00	-9.46884E+00	9.00000E+01
5.93333E+00	9.04801E+01	-9.04293E+01	0.00000E+00	3.03232E+00	0.00000E+00	-9.32640E+00	9.00000E+01
5.96667E+00	9.15969E+01	-9.15468E+01	0.00000E+00	3.02971E+00	0.00000E+00	-9.18881E+00	9.00000E+01
6.00000E+00	9.27140E+01	-9.26645E+01	0.00000E+00	3.02716E+00	0.00000E+00	-9.05590E+00	9.00000E+01

1Boat 30 mph
Request Number 32014

Force exerted on Marker 20001 by Marker 3200

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

8.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

2.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

4.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 32021

Displacement of Marker 20002 relative to Marker 3200

Time	Mag	X	Y	Z	Yaw	Pitch	Roll

0.00000E+00	1.39020E+02	1.39019E+02	0.00000E+00	3.85000E-01	0.00000E+00	0.00000E+00	9.00000E+01
3.33333E-02	1.37554E+02	1.37554E+02	0.00000E+00	3.96936E-01	0.00000E+00	-4.79338E-02	9.00000E+01
6.66667E-02	1.36091E+02	1.36090E+02	0.00000E+00	4.25202E-01	0.00000E+00	-1.55993E-01	9.00000E+01
1.00000E-01	1.34628E+02	1.34627E+02	0.00000E+00	4.62654E-01	0.00000E+00	-2.92789E-01	9.00000E+01
1.33333E-01	1.33166E+02	1.33165E+02	0.00000E+00	5.04582E-01	0.00000E+00	-4.40091E-01	9.00000E+01
1.66667E-01	1.31704E+02	1.31703E+02	0.00000E+00	5.48054E-01	0.00000E+00	-5.88407E-01	9.00000E+01
2.00000E-01	1.30242E+02	1.30240E+02	0.00000E+00	5.91272E-01	0.00000E+00	-7.33209E-01	9.00000E+01
2.33333E-01	1.28779E+02	1.28778E+02	0.00000E+00	6.32593E-01	0.00000E+00	-8.71037E-01	9.00000E+01
2.66667E-01	1.27317E+02	1.27315E+02	0.00000E+00	6.71169E-01	0.00000E+00	-1.00100E+00	9.00000E+01
3.00000E-01	1.25854E+02	1.25852E+02	0.00000E+00	7.06600E-01	0.00000E+00	-1.12335E+00	9.00000E+01
3.33333E-01	1.24391E+02	1.24389E+02	0.00000E+00	7.38674E-01	0.00000E+00	-1.23864E+00	9.00000E+01
3.66667E-01	1.22928E+02	1.22926E+02	0.00000E+00	7.67431E-01	0.00000E+00	-1.34755E+00	9.00000E+01
4.00000E-01	1.21465E+02	1.21463E+02	0.00000E+00	7.92960E-01	0.00000E+00	-1.45068E+00	9.00000E+01
4.33333E-01	1.20002E+02	1.19999E+02	0.00000E+00	8.15433E-01	0.00000E+00	-1.54857E+00	9.00000E+01
4.66667E-01	1.18538E+02	1.18536E+02	0.00000E+00	8.35087E-01	0.00000E+00	-1.64181E+00	9.00000E+01
5.00000E-01	1.17075E+02	1.17072E+02	0.00000E+00	8.52194E-01	0.00000E+00	-1.73090E+00	9.00000E+01
5.33333E-01	1.15611E+02	1.15608E+02	0.00000E+00	8.67036E-01	0.00000E+00	-1.81631E+00	9.00000E+01
5.66667E-01	1.14148E+02	1.14144E+02	0.00000E+00	8.79956E-01	0.00000E+00	-1.89852E+00	9.00000E+01
6.00000E-01	1.12684E+02	1.12680E+02	0.00000E+00	8.91270E-01	0.00000E+00	-1.97793E+00	9.00000E+01
6.33333E-01	1.11220E+02	1.11216E+02	0.00000E+00	9.01267E-01	0.00000E+00	-2.05485E+00	9.00000E+01
6.66667E-01	1.09756E+02	1.09752E+02	0.00000E+00	9.10216E-01	0.00000E+00	-2.12954E+00	9.00000E+01
7.00000E-01	1.08292E+02	1.08288E+02	0.00000E+00	9.18366E-01	0.00000E+00	-2.20222E+00	9.00000E+01
7.33333E-01	1.06828E+02	1.06824E+02	0.00000E+00	9.25923E-01	0.00000E+00	-2.27306E+00	9.00000E+01
7.66667E-01	1.05364E+02	1.05359E+02	0.00000E+00	9.33067E-01	0.00000E+00	-2.34219E+00	9.00000E+01
8.00000E-01	1.03899E+02	1.03895E+02	0.00000E+00	9.39949E-01	0.00000E+00	-2.40972E+00	9.00000E+01
8.33333E-01	1.02435E+02	1.02431E+02	0.00000E+00	9.46686E-01	0.00000E+00	-2.47572E+00	9.00000E+01
8.66667E-01	1.00971E+02	1.00966E+02	0.00000E+00	9.53373E-01	0.00000E+00	-2.54026E+00	9.00000E+01
9.00000E-01	9.95067E+01	9.95020E+01	0.00000E+00	9.60078E-01	0.00000E+00	-2.60337E+00	9.00000E+01
9.33333E-01	9.80423E+01	9.80376E+01	0.00000E+00	9.66844E-01	0.00000E+00	-2.66508E+00	9.00000E+01
9.66667E-01	9.65780E+01	9.65731E+01	0.00000E+00	9.73696E-01	0.00000E+00	-2.72539E+00	9.00000E+01
1.00000E+00	9.51136E+01	9.51086E+01	0.00000E+00	9.80644E-01	0.00000E+00	-2.78433E+00	9.00000E+01
1.03333E+00	9.36492E+01	9.36440E+01	0.00000E+00	9.87534E-01	0.00000E+00	-2.84191E+00	9.00000E+01
1.06667E+00	9.21848E+01	9.21794E+01	0.00000E+00	9.94087E-01	0.00000E+00	-2.89813E+00	9.00000E+01
1.10000E+00	9.07203E+01	9.07148E+01	0.00000E+00	1.00015E+00	0.00000E+00	-2.95303E+00	9.00000E+01
1.13333E+00	8.92558E+01	8.92501E+01	0.00000E+00	1.00573E+00	0.00000E+00	-3.00668E+00	9.00000E+01
1.16667E+00	8.77912E+01	8.77854E+01	0.00000E+00	1.01094E+00	0.00000E+00	-3.05912E+00	9.00000E+01
1.20000E+00	8.63266E+01	8.63207E+01	0.00000E+00	1.01594E+00	0.00000E+00	-3.11043E+00	9.00000E+01
1.23333E+00	8.48620E+01	8.48559E+01	0.00000E+00	1.02086E+00	0.00000E+00	-3.16066E+00	9.00000E+01
1.26667E+00	8.33974E+01	8.33911E+01	0.00000E+00	1.02582E+00	0.00000E+00	-3.20984E+00	9.00000E+01
1.30000E+00	8.19327E+01	8.19262E+01	0.00000E+00	1.03090E+00	0.00000E+00	-3.25799E+00	9.00000E+01
1.33333E+00	8.04680E+01	8.04614E+01	0.00000E+00	1.03620E+00	0.00000E+00	-3.30512E+00	9.00000E+01
1.36667E+00	7.90033E+01	7.89965E+01	0.00000E+00	1.04177E+00	0.00000E+00	-3.35123E+00	9.00000E+01
1.40000E+00	7.75386E+01	7.75315E+01	0.00000E+00	1.04768E+00	0.00000E+00	-3.39629E+00	9.00000E+01
1.43333E+00	7.60738E+01	7.60665E+01	0.00000E+00	1.05394E+00	0.00000E+00	-3.44030E+00	9.00000E+01
1.46667E+00	7.46091E+01	7.46015E+01	0.00000E+00	1.06057E+00	0.00000E+00	-3.48321E+00	9.00000E+01
1.50000E+00	7.31443E+01	7.31365E+01	0.00000E+00	1.06755E+00	0.00000E+00	-3.52500E+00	9.00000E+01
1.53333E+00	7.16795E+01	7.16714E+01	0.00000E+00	1.07485E+00	0.00000E+00	-3.56565E+00	9.00000E+01
1.56667E+00	7.02146E+01	7.02063E+01	0.00000E+00	1.08242E+00	0.00000E+00	-3.60512E+00	9.00000E+01
1.60000E+00	6.87498E+01	6.87411E+01	0.00000E+00	1.09019E+00	0.00000E+00	-3.64340E+00	9.00000E+01
1.63333E+00	6.72849E+01	6.72759E+01	0.00000E+00	1.09810E+00	0.00000E+00	-3.68047E+00	9.00000E+01
1.66667E+00	6.58199E+01	6.58106E+01	0.00000E+00	1.10604E+00	0.00000E+00	-3.71633E+00	9.00000E+01
1.70000E+00	6.43550E+01	6.43453E+01	0.00000E+00	1.11393E+00	0.00000E+00	-3.75098E+00	9.00000E+01
1.73333E+00	6.28900E+01	6.28800E+01	0.00000E+00	1.12167E+00	0.00000E+00	-3.78444E+00	9.00000E+01
1.76667E+00	6.14250E+01	6.14146E+01	0.00000E+00	1.12916E+00	0.00000E+00	-3.81673E+00	9.00000E+01

1.80000E+00	5.99600E+01	5.99492E+01	0.00000E+00	1.13631E+00	0.00000E+00	-3.84788E+00	9.00000E+01
1.83333E+00	5.84949E+01	5.84837E+01	0.00000E+00	1.14305E+00	0.00000E+00	-3.87795E+00	9.00000E+01
1.86667E+00	5.70298E+01	5.70182E+01	0.00000E+00	1.14931E+00	0.00000E+00	-3.90697E+00	9.00000E+01
1.90000E+00	5.55647E+01	5.55527E+01	0.00000E+00	1.15501E+00	0.00000E+00	-3.93503E+00	9.00000E+01
1.93333E+00	5.40995E+01	5.40871E+01	0.00000E+00	1.16013E+00	0.00000E+00	-3.96217E+00	9.00000E+01
1.96667E+00	5.26344E+01	5.26215E+01	0.00000E+00	1.16465E+00	0.00000E+00	-3.98847E+00	9.00000E+01
2.00000E+00	5.11692E+01	5.11559E+01	0.00000E+00	1.16855E+00	0.00000E+00	-4.01399E+00	9.00000E+01
2.03333E+00	4.97040E+01	4.96902E+01	0.00000E+00	1.17183E+00	0.00000E+00	-4.03876E+00	9.00000E+01
2.06667E+00	4.82388E+01	4.82245E+01	0.00000E+00	1.17454E+00	0.00000E+00	-4.06286E+00	9.00000E+01
2.10000E+00	4.67736E+01	4.67588E+01	0.00000E+00	1.17671E+00	0.00000E+00	-4.08635E+00	9.00000E+01
2.13333E+00	4.53084E+01	4.52930E+01	0.00000E+00	1.17841E+00	0.00000E+00	-4.10931E+00	9.00000E+01
2.16667E+00	4.38432E+01	4.38273E+01	0.00000E+00	1.17971E+00	0.00000E+00	-4.13180E+00	9.00000E+01
2.20000E+00	4.23780E+01	4.23615E+01	0.00000E+00	1.18072E+00	0.00000E+00	-4.15388E+00	9.00000E+01
2.23333E+00	4.09128E+01	4.08957E+01	0.00000E+00	1.18152E+00	0.00000E+00	-4.17560E+00	9.00000E+01
2.26667E+00	3.94477E+01	3.94300E+01	0.00000E+00	1.18221E+00	0.00000E+00	-4.19700E+00	9.00000E+01
2.30000E+00	3.79826E+01	3.79642E+01	0.00000E+00	1.18290E+00	0.00000E+00	-4.21811E+00	9.00000E+01
2.33333E+00	3.65175E+01	3.64983E+01	0.00000E+00	1.18367E+00	0.00000E+00	-4.23894E+00	9.00000E+01
2.36667E+00	3.50525E+01	3.50325E+01	0.00000E+00	1.18463E+00	0.00000E+00	-4.25949E+00	9.00000E+01
2.40000E+00	3.35876E+01	3.35667E+01	0.00000E+00	1.18584E+00	0.00000E+00	-4.27976E+00	9.00000E+01
2.43333E+00	3.21228E+01	3.21008E+01	0.00000E+00	1.18738E+00	0.00000E+00	-4.29972E+00	9.00000E+01
2.46667E+00	3.06581E+01	3.06350E+01	0.00000E+00	1.18929E+00	0.00000E+00	-4.31935E+00	9.00000E+01
2.50000E+00	2.91934E+01	2.91691E+01	0.00000E+00	1.19160E+00	0.00000E+00	-4.33862E+00	9.00000E+01
2.53333E+00	2.77290E+01	2.77032E+01	0.00000E+00	1.19433E+00	0.00000E+00	-4.35748E+00	9.00000E+01
2.56667E+00	2.62646E+01	2.62373E+01	0.00000E+00	1.19747E+00	0.00000E+00	-4.37589E+00	9.00000E+01
2.60000E+00	2.48005E+01	2.47714E+01	0.00000E+00	1.20099E+00	0.00000E+00	-4.39380E+00	9.00000E+01
2.63333E+00	2.33366E+01	2.33055E+01	0.00000E+00	1.20487E+00	0.00000E+00	-4.41118E+00	9.00000E+01
2.66667E+00	2.18729E+01	2.18395E+01	0.00000E+00	1.20903E+00	0.00000E+00	-4.42798E+00	9.00000E+01
2.70000E+00	2.04096E+01	2.03735E+01	0.00000E+00	1.21343E+00	0.00000E+00	-4.44419E+00	9.00000E+01
2.73333E+00	1.89467E+01	1.89075E+01	0.00000E+00	1.21796E+00	0.00000E+00	-4.45975E+00	9.00000E+01
2.76667E+00	1.74842E+01	1.74414E+01	0.00000E+00	1.22255E+00	0.00000E+00	-4.47468E+00	9.00000E+01
2.80000E+00	1.60224E+01	1.59754E+01	0.00000E+00	1.22711E+00	0.00000E+00	-4.48894E+00	9.00000E+01
2.83333E+00	1.45614E+01	1.45093E+01	0.00000E+00	1.23155E+00	0.00000E+00	-4.50255E+00	9.00000E+01
2.86667E+00	1.31016E+01	1.30431E+01	0.00000E+00	1.23577E+00	0.00000E+00	-4.51553E+00	9.00000E+01
2.90000E+00	1.16432E+01	1.15770E+01	0.00000E+00	1.23970E+00	0.00000E+00	-4.52788E+00	9.00000E+01
2.93333E+00	1.01870E+01	1.01108E+01	0.00000E+00	1.24327E+00	0.00000E+00	-4.53965E+00	9.00000E+01
2.96667E+00	8.73403E+00	8.64463E+00	0.00000E+00	1.24641E+00	0.00000E+00	-4.55087E+00	9.00000E+01
3.00000E+00	7.28628E+00	7.17842E+00	0.00000E+00	1.24908E+00	0.00000E+00	-4.56159E+00	9.00000E+01
3.03333E+00	5.84762E+00	5.71218E+00	0.00000E+00	1.25125E+00	0.00000E+00	-4.57187E+00	9.00000E+01
3.06667E+00	4.42693E+00	4.24593E+00	0.00000E+00	1.25291E+00	0.00000E+00	-4.58176E+00	9.00000E+01
3.10000E+00	3.04946E+00	2.77967E+00	0.00000E+00	1.25406E+00	0.00000E+00	-4.59133E+00	9.00000E+01
3.13333E+00	1.81925E+00	1.31515E+00	0.00000E+00	1.25700E+00	0.00000E+00	-4.60579E+00	9.00000E+01
3.16667E+00	1.31169E+00	-1.10653E-01	0.00000E+00	1.30701E+00	0.00000E+00	-4.71147E+00	9.00000E+01
3.20000E+00	2.03600E+00	-1.53423E+00	0.00000E+00	1.33845E+00	0.00000E+00	-4.74291E+00	9.00000E+01
3.23333E+00	3.25513E+00	-2.96594E+00	0.00000E+00	1.34128E+00	0.00000E+00	-4.70954E+00	9.00000E+01
3.26667E+00	4.59201E+00	-4.39187E+00	0.00000E+00	1.34088E+00	0.00000E+00	-4.68547E+00	9.00000E+01
3.30000E+00	5.96042E+00	-5.80736E+00	0.00000E+00	1.34208E+00	0.00000E+00	-4.70092E+00	9.00000E+01
3.33333E+00	7.23233E+00	-7.08686E+00	0.00000E+00	1.44328E+00	0.00000E+00	-6.03910E+00	9.00000E+01
3.36667E+00	8.23176E+00	-8.02082E+00	0.00000E+00	1.85158E+00	0.00000E+00	-1.12162E+01	9.00000E+01
3.40000E+00	9.05860E+00	-8.71835E+00	0.00000E+00	2.45939E+00	0.00000E+00	-1.89897E+01	9.00000E+01
3.43333E+00	9.86637E+00	-9.41434E+00	0.00000E+00	2.95219E+00	0.00000E+00	-2.56629E+01	9.00000E+01
3.46667E+00	1.06993E+01	-1.01817E+01	0.00000E+00	3.28769E+00	0.00000E+00	-3.04751E+01	9.00000E+01
3.50000E+00	1.15571E+01	-1.10080E+01	0.00000E+00	3.51990E+00	0.00000E+00	-3.39278E+01	9.00000E+01
3.53333E+00	1.24386E+01	-1.18811E+01	0.00000E+00	3.68218E+00	0.00000E+00	-3.63619E+01	9.00000E+01
3.56667E+00	1.33489E+01	-1.27963E+01	0.00000E+00	3.80090E+00	0.00000E+00	-3.78797E+01	9.00000E+01

3.60000E+00	1.42931E+01	-1.37508E+01	0.00000E+00	3.89981E+00	0.00000E+00	-3.85228E+01	9.00000E+01
3.63333E+00	1.52736E+01	-1.47424E+01	0.00000E+00	3.99315E+00	0.00000E+00	-3.83880E+01	9.00000E+01
3.66667E+00	1.62722E+01	-1.57556E+01	0.00000E+00	4.06761E+00	0.00000E+00	-3.78771E+01	9.00000E+01
3.70000E+00	1.72689E+01	-1.67735E+01	0.00000E+00	4.10656E+00	0.00000E+00	-3.72916E+01	9.00000E+01
3.73333E+00	1.82615E+01	-1.77939E+01	0.00000E+00	4.10538E+00	0.00000E+00	-3.66581E+01	9.00000E+01
3.76667E+00	1.92519E+01	-1.88169E+01	0.00000E+00	4.06935E+00	0.00000E+00	-3.59659E+01	9.00000E+01
3.80000E+00	2.02408E+01	-1.98420E+01	0.00000E+00	3.99847E+00	0.00000E+00	-3.52284E+01	9.00000E+01
3.83333E+00	2.12276E+01	-2.08670E+01	0.00000E+00	3.89604E+00	0.00000E+00	-3.44785E+01	9.00000E+01
3.86667E+00	2.22098E+01	-2.18887E+01	0.00000E+00	3.76292E+00	0.00000E+00	-3.38717E+01	9.00000E+01
3.90000E+00	2.31977E+01	-2.29153E+01	0.00000E+00	3.60842E+00	0.00000E+00	-3.34803E+01	9.00000E+01
3.93333E+00	2.41953E+01	-2.39496E+01	0.00000E+00	3.43971E+00	0.00000E+00	-3.31383E+01	9.00000E+01
3.96667E+00	2.52007E+01	-2.49899E+01	0.00000E+00	3.25254E+00	0.00000E+00	-3.27476E+01	9.00000E+01
4.00000E+00	2.62133E+01	-2.60362E+01	0.00000E+00	3.04181E+00	0.00000E+00	-3.23045E+01	9.00000E+01
4.03333E+00	2.72353E+01	-2.70884E+01	0.00000E+00	2.82449E+00	0.00000E+00	-3.18137E+01	9.00000E+01
4.06667E+00	2.82678E+01	-2.81462E+01	0.00000E+00	2.61945E+00	0.00000E+00	-3.12828E+01	9.00000E+01
4.10000E+00	2.93100E+01	-2.92091E+01	0.00000E+00	2.43008E+00	0.00000E+00	-3.07180E+01	9.00000E+01
4.13333E+00	3.03607E+01	-3.02767E+01	0.00000E+00	2.25609E+00	0.00000E+00	-3.01251E+01	9.00000E+01
4.16667E+00	3.14187E+01	-3.13486E+01	0.00000E+00	2.09695E+00	0.00000E+00	-2.95104E+01	9.00000E+01
4.20000E+00	3.24831E+01	-3.24244E+01	0.00000E+00	1.95244E+00	0.00000E+00	-2.88785E+01	9.00000E+01
4.23333E+00	3.35531E+01	-3.35036E+01	0.00000E+00	1.82250E+00	0.00000E+00	-2.82344E+01	9.00000E+01
4.26667E+00	3.46279E+01	-3.45858E+01	0.00000E+00	1.70712E+00	0.00000E+00	-2.75827E+01	9.00000E+01
4.30000E+00	3.57069E+01	-3.56707E+01	0.00000E+00	1.60628E+00	0.00000E+00	-2.69281E+01	9.00000E+01
4.33333E+00	3.67893E+01	-3.67579E+01	0.00000E+00	1.51986E+00	0.00000E+00	-2.62745E+01	9.00000E+01
4.36667E+00	3.78748E+01	-3.78471E+01	0.00000E+00	1.44761E+00	0.00000E+00	-2.56258E+01	9.00000E+01
4.40000E+00	3.89628E+01	-3.89380E+01	0.00000E+00	1.38918E+00	0.00000E+00	-2.49842E+01	9.00000E+01
4.43333E+00	4.00530E+01	-4.00305E+01	0.00000E+00	1.34388E+00	0.00000E+00	-2.43532E+01	9.00000E+01
4.46667E+00	4.11450E+01	-4.11241E+01	0.00000E+00	1.31078E+00	0.00000E+00	-2.37353E+01	9.00000E+01
4.50000E+00	4.22385E+01	-4.22189E+01	0.00000E+00	1.28872E+00	0.00000E+00	-2.31320E+01	9.00000E+01
4.53333E+00	4.33334E+01	-4.33146E+01	0.00000E+00	1.27641E+00	0.00000E+00	-2.25444E+01	9.00000E+01
4.56667E+00	4.44294E+01	-4.44112E+01	0.00000E+00	1.27250E+00	0.00000E+00	-2.19731E+01	9.00000E+01
4.60000E+00	4.55265E+01	-4.55086E+01	0.00000E+00	1.27562E+00	0.00000E+00	-2.14184E+01	9.00000E+01
4.63333E+00	4.66245E+01	-4.66068E+01	0.00000E+00	1.28442E+00	0.00000E+00	-2.08805E+01	9.00000E+01
4.66667E+00	4.77234E+01	-4.77057E+01	0.00000E+00	1.29763E+00	0.00000E+00	-2.03591E+01	9.00000E+01
4.70000E+00	4.88230E+01	-4.88054E+01	0.00000E+00	1.31407E+00	0.00000E+00	-1.98540E+01	9.00000E+01
4.73333E+00	4.99234E+01	-4.99057E+01	0.00000E+00	1.33266E+00	0.00000E+00	-1.93648E+01	9.00000E+01
4.76667E+00	5.10245E+01	-5.10066E+01	0.00000E+00	1.35247E+00	0.00000E+00	-1.88911E+01	9.00000E+01
4.80000E+00	5.21263E+01	-5.21082E+01	0.00000E+00	1.37273E+00	0.00000E+00	-1.84325E+01	9.00000E+01
4.83333E+00	5.32286E+01	-5.32104E+01	0.00000E+00	1.39273E+00	0.00000E+00	-1.79885E+01	9.00000E+01
4.86667E+00	5.43316E+01	-5.43132E+01	0.00000E+00	1.41200E+00	0.00000E+00	-1.75589E+01	9.00000E+01
4.90000E+00	5.54351E+01	-5.54166E+01	0.00000E+00	1.43014E+00	0.00000E+00	-1.71432E+01	9.00000E+01
4.93333E+00	5.65391E+01	-5.65206E+01	0.00000E+00	1.44685E+00	0.00000E+00	-1.67410E+01	9.00000E+01
4.96667E+00	5.76436E+01	-5.76251E+01	0.00000E+00	1.46194E+00	0.00000E+00	-1.63519E+01	9.00000E+01
5.00000E+00	5.87487E+01	-5.87301E+01	0.00000E+00	1.47529E+00	0.00000E+00	-1.59756E+01	9.00000E+01
5.03333E+00	5.98542E+01	-5.98357E+01	0.00000E+00	1.48686E+00	0.00000E+00	-1.56116E+01	9.00000E+01
5.06667E+00	6.09602E+01	-6.09418E+01	0.00000E+00	1.49668E+00	0.00000E+00	-1.52598E+01	9.00000E+01
5.10000E+00	6.20666E+01	-6.20484E+01	0.00000E+00	1.50479E+00	0.00000E+00	-1.49196E+01	9.00000E+01
5.13333E+00	6.31735E+01	-6.31554E+01	0.00000E+00	1.51130E+00	0.00000E+00	-1.45907E+01	9.00000E+01
5.16667E+00	6.42808E+01	-6.42629E+01	0.00000E+00	1.51631E+00	0.00000E+00	-1.42729E+01	9.00000E+01
5.20000E+00	6.53886E+01	-6.53709E+01	0.00000E+00	1.51997E+00	0.00000E+00	-1.39657E+01	9.00000E+01
5.23333E+00	6.64967E+01	-6.64793E+01	0.00000E+00	1.52243E+00	0.00000E+00	-1.36689E+01	9.00000E+01
5.26667E+00	6.76053E+01	-6.75882E+01	0.00000E+00	1.52382E+00	0.00000E+00	-1.33822E+01	9.00000E+01
5.30000E+00	6.87143E+01	-6.86974E+01	0.00000E+00	1.52429E+00	0.00000E+00	-1.31051E+01	9.00000E+01
5.33333E+00	6.98237E+01	-6.98071E+01	0.00000E+00	1.52400E+00	0.00000E+00	-1.28375E+01	9.00000E+01
5.36667E+00	7.09335E+01	-7.09172E+01	0.00000E+00	1.52306E+00	0.00000E+00	-1.25790E+01	9.00000E+01

5.40000E+00	7.20437E+01	-7.20277E+01	0.00000E+00	1.52160E+00	0.00000E+00	-1.23294E+01	9.00000E+01
5.43333E+00	7.31543E+01	-7.31385E+01	0.00000E+00	1.51974E+00	0.00000E+00	-1.20883E+01	9.00000E+01
5.46667E+00	7.42653E+01	-7.42498E+01	0.00000E+00	1.51757E+00	0.00000E+00	-1.18555E+01	9.00000E+01
5.50000E+00	7.53766E+01	-7.53614E+01	0.00000E+00	1.51517E+00	0.00000E+00	-1.16308E+01	9.00000E+01
5.53333E+00	7.64883E+01	-7.64734E+01	0.00000E+00	1.51262E+00	0.00000E+00	-1.14138E+01	9.00000E+01
5.56667E+00	7.76004E+01	-7.75857E+01	0.00000E+00	1.50999E+00	0.00000E+00	-1.12043E+01	9.00000E+01
5.60000E+00	7.87128E+01	-7.86984E+01	0.00000E+00	1.50731E+00	0.00000E+00	-1.10020E+01	9.00000E+01
5.63333E+00	7.98256E+01	-7.98114E+01	0.00000E+00	1.50463E+00	0.00000E+00	-1.08068E+01	9.00000E+01
5.66667E+00	8.09387E+01	-8.09248E+01	0.00000E+00	1.50198E+00	0.00000E+00	-1.06183E+01	9.00000E+01
5.70000E+00	8.20521E+01	-8.20384E+01	0.00000E+00	1.49938E+00	0.00000E+00	-1.04363E+01	9.00000E+01
5.73333E+00	8.31659E+01	-8.31525E+01	0.00000E+00	1.49684E+00	0.00000E+00	-1.02606E+01	9.00000E+01
5.76667E+00	8.42801E+01	-8.42668E+01	0.00000E+00	1.49436E+00	0.00000E+00	-1.00910E+01	9.00000E+01
5.80000E+00	8.53945E+01	-8.53815E+01	0.00000E+00	1.49197E+00	0.00000E+00	-9.92719E+00	9.00000E+01
5.83333E+00	8.65093E+01	-8.64965E+01	0.00000E+00	1.48964E+00	0.00000E+00	-9.76904E+00	9.00000E+01
5.86667E+00	8.76244E+01	-8.76117E+01	0.00000E+00	1.48738E+00	0.00000E+00	-9.61633E+00	9.00000E+01
5.90000E+00	8.87398E+01	-8.87273E+01	0.00000E+00	1.48518E+00	0.00000E+00	-9.46884E+00	9.00000E+01
5.93333E+00	8.98555E+01	-8.98432E+01	0.00000E+00	1.48303E+00	0.00000E+00	-9.32640E+00	9.00000E+01
5.96667E+00	9.09715E+01	-9.09594E+01	0.00000E+00	1.48093E+00	0.00000E+00	-9.18881E+00	9.00000E+01
6.00000E+00	9.20878E+01	-9.20759E+01	0.00000E+00	1.47886E+00	0.00000E+00	-9.05590E+00	9.00000E+01

1Boat 30 mph
Request Number 32024

Force exerted on Marker 20002 by Marker 3200

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

2.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	1.97326E+03	1.42648E+03	0.00000E+00	1.36341E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

4.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 32031

Displacement of Marker 20003 relative to Marker 3200

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	1.39561E+02	1.39560E+02	0.00000E+00	-3.87000E-01	0.00000E+00	0.00000E+00	9.00000E+01
3.33333E-02	1.38095E+02	1.38094E+02	0.00000E+00	-3.75517E-01	0.00000E+00	-4.79338E-02	9.00000E+01
6.66667E-02	1.36629E+02	1.36629E+02	0.00000E+00	-3.48268E-01	0.00000E+00	-1.55993E-01	9.00000E+01
1.00000E-01	1.35165E+02	1.35164E+02	0.00000E+00	-3.12101E-01	0.00000E+00	-2.92789E-01	9.00000E+01
1.33333E-01	1.33700E+02	1.33700E+02	0.00000E+00	-2.71551E-01	0.00000E+00	-4.40091E-01	9.00000E+01
1.66667E-01	1.32236E+02	1.32236E+02	0.00000E+00	-2.29461E-01	0.00000E+00	-5.88407E-01	9.00000E+01

2.00000E-01	1.30771E+02	1.30771E+02	0.00000E+00	-1.87588E-01	0.00000E+00	-7.33209E-01	9.00000E+01
2.33333E-01	1.29307E+02	1.29307E+02	0.00000E+00	-1.47542E-01	0.00000E+00	-8.71037E-01	9.00000E+01
2.66667E-01	1.27843E+02	1.27843E+02	0.00000E+00	-1.10164E-01	0.00000E+00	-1.00100E+00	9.00000E+01
3.00000E-01	1.26378E+02	1.26378E+02	0.00000E+00	-7.58579E-02	0.00000E+00	-1.12335E+00	9.00000E+01
3.33333E-01	1.24913E+02	1.24913E+02	0.00000E+00	-4.48402E-02	0.00000E+00	-1.23864E+00	9.00000E+01
3.66667E-01	1.23449E+02	1.23449E+02	0.00000E+00	-1.70778E-02	0.00000E+00	-1.34755E+00	9.00000E+01
4.00000E-01	1.21984E+02	1.21984E+02	0.00000E+00	7.51098E-03	0.00000E+00	-1.45068E+00	9.00000E+01
4.33333E-01	1.20519E+02	1.20519E+02	0.00000E+00	2.90943E-02	0.00000E+00	-1.54857E+00	9.00000E+01
4.66667E-01	1.19054E+02	1.19054E+02	0.00000E+00	4.79040E-02	0.00000E+00	-1.64181E+00	9.00000E+01
5.00000E-01	1.17589E+02	1.17589E+02	0.00000E+00	6.42053E-02	0.00000E+00	-1.73090E+00	9.00000E+01
5.33333E-01	1.16124E+02	1.16124E+02	0.00000E+00	7.82764E-02	0.00000E+00	-1.81631E+00	9.00000E+01
5.66667E-01	1.14659E+02	1.14659E+02	0.00000E+00	9.04571E-02	0.00000E+00	-1.89852E+00	9.00000E+01
6.00000E-01	1.13194E+02	1.13194E+02	0.00000E+00	1.01057E-01	0.00000E+00	-1.97793E+00	9.00000E+01
6.33333E-01	1.11729E+02	1.11729E+02	0.00000E+00	1.10365E-01	0.00000E+00	-2.05485E+00	9.00000E+01
6.66667E-01	1.10264E+02	1.10264E+02	0.00000E+00	1.18646E-01	0.00000E+00	-2.12954E+00	9.00000E+01
7.00000E-01	1.08799E+02	1.08799E+02	0.00000E+00	1.26147E-01	0.00000E+00	-2.20222E+00	9.00000E+01
7.33333E-01	1.07334E+02	1.07334E+02	0.00000E+00	1.33073E-01	0.00000E+00	-2.27306E+00	9.00000E+01
7.66667E-01	1.05868E+02	1.05868E+02	0.00000E+00	1.39603E-01	0.00000E+00	-2.34219E+00	9.00000E+01
8.00000E-01	1.04403E+02	1.04403E+02	0.00000E+00	1.45885E-01	0.00000E+00	-2.40972E+00	9.00000E+01
8.33333E-01	1.02938E+02	1.02938E+02	0.00000E+00	1.52038E-01	0.00000E+00	-2.47572E+00	9.00000E+01
8.66667E-01	1.01473E+02	1.01473E+02	0.00000E+00	1.58154E-01	0.00000E+00	-2.54026E+00	9.00000E+01
9.00000E-01	1.00008E+02	1.00007E+02	0.00000E+00	1.64301E-01	0.00000E+00	-2.60337E+00	9.00000E+01
9.33333E-01	9.85422E+01	9.85421E+01	0.00000E+00	1.70524E-01	0.00000E+00	-2.66508E+00	9.00000E+01
9.66667E-01	9.70769E+01	9.70768E+01	0.00000E+00	1.76845E-01	0.00000E+00	-2.72539E+00	9.00000E+01
1.00000E+00	9.56116E+01	9.56114E+01	0.00000E+00	1.83275E-01	0.00000E+00	-2.78433E+00	9.00000E+01
1.03333E+00	9.41463E+01	9.41461E+01	0.00000E+00	1.89661E-01	0.00000E+00	-2.84191E+00	9.00000E+01
1.06667E+00	9.26809E+01	9.26807E+01	0.00000E+00	1.95731E-01	0.00000E+00	-2.89813E+00	9.00000E+01
1.10000E+00	9.12155E+01	9.12153E+01	0.00000E+00	2.01308E-01	0.00000E+00	-2.95303E+00	9.00000E+01
1.13333E+00	8.97501E+01	8.97499E+01	0.00000E+00	2.06413E-01	0.00000E+00	-3.00668E+00	9.00000E+01
1.16667E+00	8.82847E+01	8.82844E+01	0.00000E+00	2.11171E-01	0.00000E+00	-3.05912E+00	9.00000E+01
1.20000E+00	8.68192E+01	8.68190E+01	0.00000E+00	2.15726E-01	0.00000E+00	-3.11043E+00	9.00000E+01
1.23333E+00	8.53538E+01	8.53535E+01	0.00000E+00	2.20210E-01	0.00000E+00	-3.16066E+00	9.00000E+01
1.26667E+00	8.38883E+01	8.38880E+01	0.00000E+00	2.24736E-01	0.00000E+00	-3.20984E+00	9.00000E+01
1.30000E+00	8.24228E+01	8.24225E+01	0.00000E+00	2.29403E-01	0.00000E+00	-3.25799E+00	9.00000E+01
1.33333E+00	8.09573E+01	8.09570E+01	0.00000E+00	2.34291E-01	0.00000E+00	-3.30512E+00	9.00000E+01
1.36667E+00	7.94918E+01	7.94914E+01	0.00000E+00	2.39470E-01	0.00000E+00	-3.35123E+00	9.00000E+01
1.40000E+00	7.80262E+01	7.80258E+01	0.00000E+00	2.44988E-01	0.00000E+00	-3.39629E+00	9.00000E+01
1.43333E+00	7.65607E+01	7.65602E+01	0.00000E+00	2.50871E-01	0.00000E+00	-3.44030E+00	9.00000E+01
1.46667E+00	7.50951E+01	7.50946E+01	0.00000E+00	2.57128E-01	0.00000E+00	-3.48321E+00	9.00000E+01
1.50000E+00	7.36295E+01	7.36290E+01	0.00000E+00	2.63747E-01	0.00000E+00	-3.52500E+00	9.00000E+01
1.53333E+00	7.21639E+01	7.21633E+01	0.00000E+00	2.70697E-01	0.00000E+00	-3.56565E+00	9.00000E+01
1.56667E+00	7.06982E+01	7.06977E+01	0.00000E+00	2.77928E-01	0.00000E+00	-3.60512E+00	9.00000E+01
1.60000E+00	6.92325E+01	6.92320E+01	0.00000E+00	2.85375E-01	0.00000E+00	-3.64340E+00	9.00000E+01
1.63333E+00	6.77669E+01	6.77662E+01	0.00000E+00	2.92960E-01	0.00000E+00	-3.68047E+00	9.00000E+01
1.66667E+00	6.63011E+01	6.63005E+01	0.00000E+00	3.00596E-01	0.00000E+00	-3.71633E+00	9.00000E+01
1.70000E+00	6.48354E+01	6.48347E+01	0.00000E+00	3.08189E-01	0.00000E+00	-3.75098E+00	9.00000E+01
1.73333E+00	6.33697E+01	6.33689E+01	0.00000E+00	3.15641E-01	0.00000E+00	-3.78444E+00	9.00000E+01
1.76667E+00	6.19039E+01	6.19030E+01	0.00000E+00	3.22858E-01	0.00000E+00	-3.81673E+00	9.00000E+01
1.80000E+00	6.04381E+01	6.04372E+01	0.00000E+00	3.29749E-01	0.00000E+00	-3.84788E+00	9.00000E+01
1.83333E+00	5.89722E+01	5.89713E+01	0.00000E+00	3.36233E-01	0.00000E+00	-3.87795E+00	9.00000E+01
1.86667E+00	5.75064E+01	5.75054E+01	0.00000E+00	3.42237E-01	0.00000E+00	-3.90697E+00	9.00000E+01
1.90000E+00	5.60405E+01	5.60394E+01	0.00000E+00	3.47706E-01	0.00000E+00	-3.93503E+00	9.00000E+01
1.93333E+00	5.45746E+01	5.45735E+01	0.00000E+00	3.52597E-01	0.00000E+00	-3.96217E+00	9.00000E+01
1.96667E+00	5.31087E+01	5.31075E+01	0.00000E+00	3.56888E-01	0.00000E+00	-3.98847E+00	9.00000E+01

2.00000E+00	5.16427E+01	5.16415E+01	0.00000E+00	3.60569E-01	0.00000E+00	-4.01399E+00	9.00000E+01
2.03333E+00	5.01768E+01	5.01755E+01	0.00000E+00	3.63647E-01	0.00000E+00	-4.03876E+00	9.00000E+01
2.06667E+00	4.87108E+01	4.87094E+01	0.00000E+00	3.66147E-01	0.00000E+00	-4.06286E+00	9.00000E+01
2.10000E+00	4.72448E+01	4.72434E+01	0.00000E+00	3.68118E-01	0.00000E+00	-4.08635E+00	9.00000E+01
2.13333E+00	4.57788E+01	4.57773E+01	0.00000E+00	3.69623E-01	0.00000E+00	-4.10931E+00	9.00000E+01
2.16667E+00	4.43128E+01	4.43113E+01	0.00000E+00	3.70741E-01	0.00000E+00	-4.13180E+00	9.00000E+01
2.20000E+00	4.28468E+01	4.28452E+01	0.00000E+00	3.71559E-01	0.00000E+00	-4.15388E+00	9.00000E+01
2.23333E+00	4.13808E+01	4.13791E+01	0.00000E+00	3.72175E-01	0.00000E+00	-4.17560E+00	9.00000E+01
2.26667E+00	3.99147E+01	3.99130E+01	0.00000E+00	3.72687E-01	0.00000E+00	-4.19700E+00	9.00000E+01
2.30000E+00	3.84487E+01	3.84469E+01	0.00000E+00	3.73196E-01	0.00000E+00	-4.21811E+00	9.00000E+01
2.33333E+00	3.69827E+01	3.69808E+01	0.00000E+00	3.73796E-01	0.00000E+00	-4.23894E+00	9.00000E+01
2.36667E+00	3.55167E+01	3.55147E+01	0.00000E+00	3.74577E-01	0.00000E+00	-4.25949E+00	9.00000E+01
2.40000E+00	3.40506E+01	3.40486E+01	0.00000E+00	3.75620E-01	0.00000E+00	-4.27976E+00	9.00000E+01
2.43333E+00	3.25846E+01	3.25824E+01	0.00000E+00	3.76989E-01	0.00000E+00	-4.29972E+00	9.00000E+01
2.46667E+00	3.11186E+01	3.11163E+01	0.00000E+00	3.78733E-01	0.00000E+00	-4.31935E+00	9.00000E+01
2.50000E+00	2.96526E+01	2.96502E+01	0.00000E+00	3.80884E-01	0.00000E+00	-4.33862E+00	9.00000E+01
2.53333E+00	2.81866E+01	2.81840E+01	0.00000E+00	3.83456E-01	0.00000E+00	-4.35748E+00	9.00000E+01
2.56667E+00	2.67206E+01	2.67178E+01	0.00000E+00	3.86444E-01	0.00000E+00	-4.37589E+00	9.00000E+01
2.60000E+00	2.52547E+01	2.52517E+01	0.00000E+00	3.89815E-01	0.00000E+00	-4.39380E+00	9.00000E+01
2.63333E+00	2.37887E+01	2.37855E+01	0.00000E+00	3.93544E-01	0.00000E+00	-4.41118E+00	9.00000E+01
2.66667E+00	2.23228E+01	2.23193E+01	0.00000E+00	3.97571E-01	0.00000E+00	-4.42798E+00	9.00000E+01
2.70000E+00	2.08569E+01	2.08531E+01	0.00000E+00	4.01826E-01	0.00000E+00	-4.44419E+00	9.00000E+01
2.73333E+00	1.93911E+01	1.93868E+01	0.00000E+00	4.06231E-01	0.00000E+00	-4.45975E+00	9.00000E+01
2.76667E+00	1.79253E+01	1.79206E+01	0.00000E+00	4.10697E-01	0.00000E+00	-4.47468E+00	9.00000E+01
2.80000E+00	1.64595E+01	1.64543E+01	0.00000E+00	4.15136E-01	0.00000E+00	-4.48894E+00	9.00000E+01
2.83333E+00	1.49939E+01	1.49880E+01	0.00000E+00	4.19458E-01	0.00000E+00	-4.50255E+00	9.00000E+01
2.86667E+00	1.35283E+01	1.35217E+01	0.00000E+00	4.23574E-01	0.00000E+00	-4.51553E+00	9.00000E+01
2.90000E+00	1.20629E+01	1.20554E+01	0.00000E+00	4.27403E-01	0.00000E+00	-4.52788E+00	9.00000E+01
2.93333E+00	1.05978E+01	1.05890E+01	0.00000E+00	4.30871E-01	0.00000E+00	-4.53965E+00	9.00000E+01
2.96667E+00	9.13299E+00	9.12267E+00	0.00000E+00	4.33917E-01	0.00000E+00	-4.55087E+00	9.00000E+01
3.00000E+00	7.66874E+00	7.65631E+00	0.00000E+00	4.36497E-01	0.00000E+00	-4.56159E+00	9.00000E+01
3.03333E+00	6.20544E+00	6.18993E+00	0.00000E+00	4.38582E-01	0.00000E+00	-4.57187E+00	9.00000E+01
3.06667E+00	4.74400E+00	4.72353E+00	0.00000E+00	4.40157E-01	0.00000E+00	-4.58176E+00	9.00000E+01
3.10000E+00	3.28589E+00	3.25714E+00	0.00000E+00	4.41229E-01	0.00000E+00	-4.59133E+00	9.00000E+01
3.13333E+00	1.84656E+00	1.79238E+00	0.00000E+00	4.44031E-01	0.00000E+00	-4.60579E+00	9.00000E+01
3.16667E+00	6.12621E-01	3.64165E-01	0.00000E+00	4.92634E-01	0.00000E+00	-4.71147E+00	9.00000E+01
3.20000E+00	1.18270E+00	-1.06059E+00	0.00000E+00	5.23379E-01	0.00000E+00	-4.74291E+00	9.00000E+01
3.23333E+00	2.54707E+00	-2.49210E+00	0.00000E+00	5.26338E-01	0.00000E+00	-4.70954E+00	9.00000E+01
3.26667E+00	3.95300E+00	-3.91784E+00	0.00000E+00	5.26047E-01	0.00000E+00	-4.68547E+00	9.00000E+01
3.30000E+00	5.35943E+00	-5.33344E+00	0.00000E+00	5.27187E-01	0.00000E+00	-4.70092E+00	9.00000E+01
3.33333E+00	6.64983E+00	-6.62048E+00	0.00000E+00	6.24033E-01	0.00000E+00	-6.03910E+00	9.00000E+01
3.36667E+00	7.64992E+00	-7.58198E+00	0.00000E+00	1.01726E+00	0.00000E+00	-1.12162E+01	9.00000E+01
3.40000E+00	8.47015E+00	-8.31636E+00	0.00000E+00	1.60671E+00	0.00000E+00	-1.89897E+01	9.00000E+01
3.43333E+00	9.27528E+00	-9.03715E+00	0.00000E+00	2.08825E+00	0.00000E+00	-2.56629E+01	9.00000E+01
3.46667E+00	1.01103E+01	-9.81682E+00	0.00000E+00	2.41847E+00	0.00000E+00	-3.04751E+01	9.00000E+01
3.50000E+00	1.09732E+01	-1.06489E+01	0.00000E+00	2.64832E+00	0.00000E+00	-3.39278E+01	9.00000E+01
3.53333E+00	1.18618E+01	-1.15243E+01	0.00000E+00	2.80965E+00	0.00000E+00	-3.63619E+01	9.00000E+01
3.56667E+00	1.27796E+01	-1.24395E+01	0.00000E+00	2.92832E+00	0.00000E+00	-3.78797E+01	9.00000E+01
3.60000E+00	1.37305E+01	-1.33925E+01	0.00000E+00	3.02785E+00	0.00000E+00	-3.85228E+01	9.00000E+01
3.63333E+00	1.47164E+01	-1.43814E+01	0.00000E+00	3.12231E+00	0.00000E+00	-3.83880E+01	9.00000E+01
3.66667E+00	1.57209E+01	-1.53922E+01	0.00000E+00	3.19777E+00	0.00000E+00	-3.78771E+01	9.00000E+01
3.70000E+00	1.67252E+01	-1.64089E+01	0.00000E+00	3.23723E+00	0.00000E+00	-3.72916E+01	9.00000E+01
3.73333E+00	1.77268E+01	-1.74287E+01	0.00000E+00	3.23730E+00	0.00000E+00	-3.66581E+01	9.00000E+01
3.76667E+00	1.87270E+01	-1.84515E+01	0.00000E+00	3.20038E+00	0.00000E+00	-3.59659E+01	9.00000E+01

3.80000E+00	1.97262E+01	-1.94764E+01	0.00000E+00	3.12956E+00	0.00000E+00	-3.52284E+01	9.00000E+01
3.83333E+00	2.07235E+01	-2.05012E+01	0.00000E+00	3.02722E+00	0.00000E+00	-3.44785E+01	9.00000E+01
3.86667E+00	2.17153E+01	-2.15215E+01	0.00000E+00	2.89472E+00	0.00000E+00	-3.38717E+01	9.00000E+01
3.90000E+00	2.27117E+01	-2.25457E+01	0.00000E+00	2.74122E+00	0.00000E+00	-3.34803E+01	9.00000E+01
3.93333E+00	2.37183E+01	-2.35783E+01	0.00000E+00	2.57319E+00	0.00000E+00	-3.31383E+01	9.00000E+01
3.96667E+00	2.47333E+01	-2.46179E+01	0.00000E+00	2.38636E+00	0.00000E+00	-3.27476E+01	9.00000E+01
4.00000E+00	2.57558E+01	-2.56637E+01	0.00000E+00	2.17583E+00	0.00000E+00	-3.23045E+01	9.00000E+01
4.03333E+00	2.67873E+01	-2.67156E+01	0.00000E+00	1.95865E+00	0.00000E+00	-3.18137E+01	9.00000E+01
4.06667E+00	2.78283E+01	-2.77730E+01	0.00000E+00	1.75378E+00	0.00000E+00	-3.12828E+01	9.00000E+01
4.10000E+00	2.88778E+01	-2.88353E+01	0.00000E+00	1.56464E+00	0.00000E+00	-3.07180E+01	9.00000E+01
4.13333E+00	2.99346E+01	-2.99023E+01	0.00000E+00	1.39097E+00	0.00000E+00	-3.01251E+01	9.00000E+01
4.16667E+00	3.09977E+01	-3.09732E+01	0.00000E+00	1.23224E+00	0.00000E+00	-2.95104E+01	9.00000E+01
4.20000E+00	3.20663E+01	-3.20478E+01	0.00000E+00	1.08823E+00	0.00000E+00	-2.88785E+01	9.00000E+01
4.23333E+00	3.31395E+01	-3.31257E+01	0.00000E+00	9.58881E-01	0.00000E+00	-2.82344E+01	9.00000E+01
4.26667E+00	3.42168E+01	-3.42064E+01	0.00000E+00	8.44160E-01	0.00000E+00	-2.75827E+01	9.00000E+01
4.30000E+00	3.52975E+01	-3.52897E+01	0.00000E+00	7.44036E-01	0.00000E+00	-2.69281E+01	9.00000E+01
4.33333E+00	3.63811E+01	-3.63751E+01	0.00000E+00	6.58384E-01	0.00000E+00	-2.62745E+01	9.00000E+01
4.36667E+00	3.74671E+01	-3.74625E+01	0.00000E+00	5.86916E-01	0.00000E+00	-2.56258E+01	9.00000E+01
4.40000E+00	3.85553E+01	-3.85517E+01	0.00000E+00	5.29293E-01	0.00000E+00	-2.49842E+01	9.00000E+01
4.43333E+00	3.96453E+01	-3.96423E+01	0.00000E+00	4.84812E-01	0.00000E+00	-2.43532E+01	9.00000E+01
4.46667E+00	4.07367E+01	-4.07342E+01	0.00000E+00	4.52515E-01	0.00000E+00	-2.37353E+01	9.00000E+01
4.50000E+00	4.18294E+01	-4.18272E+01	0.00000E+00	4.31245E-01	0.00000E+00	-2.31320E+01	9.00000E+01
4.53333E+00	4.29233E+01	-4.29212E+01	0.00000E+00	4.19712E-01	0.00000E+00	-2.25444E+01	9.00000E+01
4.56667E+00	4.40182E+01	-4.40162E+01	0.00000E+00	4.16560E-01	0.00000E+00	-2.19731E+01	9.00000E+01
4.60000E+00	4.51140E+01	-4.51120E+01	0.00000E+00	4.20420E-01	0.00000E+00	-2.14184E+01	9.00000E+01
4.63333E+00	4.62106E+01	-4.62086E+01	0.00000E+00	4.29952E-01	0.00000E+00	-2.08805E+01	9.00000E+01
4.66667E+00	4.73081E+01	-4.73060E+01	0.00000E+00	4.43876E-01	0.00000E+00	-2.03591E+01	9.00000E+01
4.70000E+00	4.84064E+01	-4.84042E+01	0.00000E+00	4.61007E-01	0.00000E+00	-1.98540E+01	9.00000E+01
4.73333E+00	4.95053E+01	-4.95030E+01	0.00000E+00	4.80284E-01	0.00000E+00	-1.93648E+01	9.00000E+01
4.76667E+00	5.06050E+01	-5.06025E+01	0.00000E+00	5.00778E-01	0.00000E+00	-1.88911E+01	9.00000E+01
4.80000E+00	5.17053E+01	-5.17027E+01	0.00000E+00	5.21700E-01	0.00000E+00	-1.84325E+01	9.00000E+01
4.83333E+00	5.28063E+01	-5.28035E+01	0.00000E+00	5.42367E-01	0.00000E+00	-1.79885E+01	9.00000E+01
4.86667E+00	5.39079E+01	-5.39050E+01	0.00000E+00	5.62293E-01	0.00000E+00	-1.75589E+01	9.00000E+01
4.90000E+00	5.50101E+01	-5.50070E+01	0.00000E+00	5.81078E-01	0.00000E+00	-1.71432E+01	9.00000E+01
4.93333E+00	5.61129E+01	-5.61097E+01	0.00000E+00	5.98430E-01	0.00000E+00	-1.67410E+01	9.00000E+01
4.96667E+00	5.72162E+01	-5.72129E+01	0.00000E+00	6.14153E-01	0.00000E+00	-1.63519E+01	9.00000E+01
5.00000E+00	5.83200E+01	-5.83166E+01	0.00000E+00	6.28135E-01	0.00000E+00	-1.59756E+01	9.00000E+01
5.03333E+00	5.94244E+01	-5.94209E+01	0.00000E+00	6.40333E-01	0.00000E+00	-1.56116E+01	9.00000E+01
5.06667E+00	6.05292E+01	-6.05257E+01	0.00000E+00	6.50763E-01	0.00000E+00	-1.52598E+01	9.00000E+01
5.10000E+00	6.16346E+01	-6.16311E+01	0.00000E+00	6.59485E-01	0.00000E+00	-1.49196E+01	9.00000E+01
5.13333E+00	6.27405E+01	-6.27369E+01	0.00000E+00	6.66592E-01	0.00000E+00	-1.45907E+01	9.00000E+01
5.16667E+00	6.38468E+01	-6.38432E+01	0.00000E+00	6.72202E-01	0.00000E+00	-1.42729E+01	9.00000E+01
5.20000E+00	6.49535E+01	-6.49500E+01	0.00000E+00	6.76451E-01	0.00000E+00	-1.39657E+01	9.00000E+01
5.23333E+00	6.60608E+01	-6.60573E+01	0.00000E+00	6.79483E-01	0.00000E+00	-1.36689E+01	9.00000E+01
5.26667E+00	6.71684E+01	-6.71650E+01	0.00000E+00	6.81445E-01	0.00000E+00	-1.33822E+01	9.00000E+01
5.30000E+00	6.82765E+01	-6.82731E+01	0.00000E+00	6.82484E-01	0.00000E+00	-1.31051E+01	9.00000E+01
5.33333E+00	6.93851E+01	-6.93817E+01	0.00000E+00	6.82741E-01	0.00000E+00	-1.28375E+01	9.00000E+01
5.36667E+00	7.04940E+01	-7.04907E+01	0.00000E+00	6.82346E-01	0.00000E+00	-1.25790E+01	9.00000E+01
5.40000E+00	7.16034E+01	-7.16002E+01	0.00000E+00	6.81425E-01	0.00000E+00	-1.23294E+01	9.00000E+01
5.43333E+00	7.27132E+01	-7.27100E+01	0.00000E+00	6.80087E-01	0.00000E+00	-1.20883E+01	9.00000E+01
5.46667E+00	7.38233E+01	-7.38202E+01	0.00000E+00	6.78429E-01	0.00000E+00	-1.18555E+01	9.00000E+01
5.50000E+00	7.49339E+01	-7.49308E+01	0.00000E+00	6.76538E-01	0.00000E+00	-1.16308E+01	9.00000E+01
5.53333E+00	7.60448E+01	-7.60419E+01	0.00000E+00	6.74486E-01	0.00000E+00	-1.14138E+01	9.00000E+01
5.56667E+00	7.71562E+01	-7.71532E+01	0.00000E+00	6.72335E-01	0.00000E+00	-1.12043E+01	9.00000E+01

5.60000E+00	7.82679E+01	-7.82650E+01	0.00000E+00	6.70134E-01	0.00000E+00	-1.10020E+01	9.00000E+01
5.63333E+00	7.93799E+01	-7.93771E+01	0.00000E+00	6.67922E-01	0.00000E+00	-1.08068E+01	9.00000E+01
5.66667E+00	8.04924E+01	-8.04896E+01	0.00000E+00	6.65728E-01	0.00000E+00	-1.06183E+01	9.00000E+01
5.70000E+00	8.16051E+01	-8.16024E+01	0.00000E+00	6.63572E-01	0.00000E+00	-1.04363E+01	9.00000E+01
5.73333E+00	8.27183E+01	-8.27156E+01	0.00000E+00	6.61470E-01	0.00000E+00	-1.02606E+01	9.00000E+01
5.76667E+00	8.38318E+01	-8.38292E+01	0.00000E+00	6.59427E-01	0.00000E+00	-1.00910E+01	9.00000E+01
5.80000E+00	8.49456E+01	-8.49430E+01	0.00000E+00	6.57448E-01	0.00000E+00	-9.92719E+00	9.00000E+01
5.83333E+00	8.60597E+01	-8.60572E+01	0.00000E+00	6.55531E-01	0.00000E+00	-9.76904E+00	9.00000E+01
5.86667E+00	8.71742E+01	-8.71717E+01	0.00000E+00	6.53672E-01	0.00000E+00	-9.61633E+00	9.00000E+01
5.90000E+00	8.82890E+01	-8.82866E+01	0.00000E+00	6.51864E-01	0.00000E+00	-9.46884E+00	9.00000E+01
5.93333E+00	8.94041E+01	-8.94018E+01	0.00000E+00	6.50100E-01	0.00000E+00	-9.32640E+00	9.00000E+01
5.96667E+00	9.05196E+01	-9.05172E+01	0.00000E+00	6.48372E-01	0.00000E+00	-9.18881E+00	9.00000E+01
6.00000E+00	9.16353E+01	-9.16330E+01	0.00000E+00	6.46670E-01	0.00000E+00	-9.05590E+00	9.00000E+01

1Boat 30 mph
Request Number 32034

Force exerted on Marker 20003 by Marker 3200

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

3.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	1.74140E+03	1.69031E+03	0.00000E+00	4.18745E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

4.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 32041

Displacement of Marker 20004 relative to Marker 3200

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	1.40063E+02	1.40061E+02	0.00000E+00	-7.88000E-01	0.00000E+00	0.00000E+00	9.00000E+01
3.33333E-02	1.38597E+02	1.38595E+02	0.00000E+00	-7.76936E-01	0.00000E+00	-4.79338E-02	9.00000E+01
6.66667E-02	1.37131E+02	1.37129E+02	0.00000E+00	-7.50631E-01	0.00000E+00	-1.55993E-01	9.00000E+01
1.00000E-01	1.35665E+02	1.35663E+02	0.00000E+00	-7.15656E-01	0.00000E+00	-2.92789E-01	9.00000E+01
1.33333E-01	1.34200E+02	1.34198E+02	0.00000E+00	-6.76387E-01	0.00000E+00	-4.40091E-01	9.00000E+01
1.66667E-01	1.32734E+02	1.32732E+02	0.00000E+00	-6.35585E-01	0.00000E+00	-5.88407E-01	9.00000E+01
2.00000E-01	1.31268E+02	1.31267E+02	0.00000E+00	-5.94966E-01	0.00000E+00	-7.33209E-01	9.00000E+01
2.33333E-01	1.29803E+02	1.29802E+02	0.00000E+00	-5.56112E-01	0.00000E+00	-8.71037E-01	9.00000E+01
2.66667E-01	1.28337E+02	1.28336E+02	0.00000E+00	-5.19856E-01	0.00000E+00	-1.00100E+00	9.00000E+01
3.00000E-01	1.26872E+02	1.26871E+02	0.00000E+00	-4.86603E-01	0.00000E+00	-1.12335E+00	9.00000E+01
3.33333E-01	1.25406E+02	1.25406E+02	0.00000E+00	-4.56576E-01	0.00000E+00	-1.23864E+00	9.00000E+01

3.66667E-01	1.23941E+02	1.23940E+02	0.00000E+00	-4.29749E-01	0.00000E+00	-1.34755E+00	9.00000E+01
4.00000E-01	1.22475E+02	1.22475E+02	0.00000E+00	-4.06044E-01	0.00000E+00	-1.45068E+00	9.00000E+01
4.33333E-01	1.21010E+02	1.21009E+02	0.00000E+00	-3.85299E-01	0.00000E+00	-1.54857E+00	9.00000E+01
4.66667E-01	1.19544E+02	1.19544E+02	0.00000E+00	-3.67286E-01	0.00000E+00	-1.64181E+00	9.00000E+01
5.00000E-01	1.18078E+02	1.18078E+02	0.00000E+00	-3.51745E-01	0.00000E+00	-1.73090E+00	9.00000E+01
5.33333E-01	1.16613E+02	1.16612E+02	0.00000E+00	-3.38401E-01	0.00000E+00	-1.81631E+00	9.00000E+01
5.66667E-01	1.15147E+02	1.15147E+02	0.00000E+00	-3.26921E-01	0.00000E+00	-1.89852E+00	9.00000E+01
6.00000E-01	1.13681E+02	1.13681E+02	0.00000E+00	-3.16996E-01	0.00000E+00	-1.97793E+00	9.00000E+01
6.33333E-01	1.12216E+02	1.12215E+02	0.00000E+00	-3.08341E-01	0.00000E+00	-2.05485E+00	9.00000E+01
6.66667E-01	1.10750E+02	1.10750E+02	0.00000E+00	-3.00694E-01	0.00000E+00	-2.12954E+00	9.00000E+01
7.00000E-01	1.09284E+02	1.09284E+02	0.00000E+00	-2.93808E-01	0.00000E+00	-2.20222E+00	9.00000E+01
7.33333E-01	1.07819E+02	1.07818E+02	0.00000E+00	-2.87482E-01	0.00000E+00	-2.27306E+00	9.00000E+01
7.66667E-01	1.06353E+02	1.06353E+02	0.00000E+00	-2.81537E-01	0.00000E+00	-2.34219E+00	9.00000E+01
8.00000E-01	1.04887E+02	1.04887E+02	0.00000E+00	-2.75825E-01	0.00000E+00	-2.40972E+00	9.00000E+01
8.33333E-01	1.03421E+02	1.03421E+02	0.00000E+00	-2.70229E-01	0.00000E+00	-2.47572E+00	9.00000E+01
8.66667E-01	1.01956E+02	1.01955E+02	0.00000E+00	-2.64657E-01	0.00000E+00	-2.54026E+00	9.00000E+01
9.00000E-01	1.00490E+02	1.00490E+02	0.00000E+00	-2.59041E-01	0.00000E+00	-2.60337E+00	9.00000E+01
9.33333E-01	9.90242E+01	9.90239E+01	0.00000E+00	-2.53338E-01	0.00000E+00	-2.66508E+00	9.00000E+01
9.66667E-01	9.75585E+01	9.75581E+01	0.00000E+00	-2.47524E-01	0.00000E+00	-2.72539E+00	9.00000E+01
1.00000E+00	9.60927E+01	9.60924E+01	0.00000E+00	-2.41588E-01	0.00000E+00	-2.78433E+00	9.00000E+01
1.03333E+00	9.46269E+01	9.46266E+01	0.00000E+00	-2.35686E-01	0.00000E+00	-2.84191E+00	9.00000E+01
1.06667E+00	9.31611E+01	9.31608E+01	0.00000E+00	-2.30086E-01	0.00000E+00	-2.89813E+00	9.00000E+01
1.10000E+00	9.16952E+01	9.16950E+01	0.00000E+00	-2.24969E-01	0.00000E+00	-2.95303E+00	9.00000E+01
1.13333E+00	9.02294E+01	9.02292E+01	0.00000E+00	-2.20314E-01	0.00000E+00	-3.00668E+00	9.00000E+01
1.16667E+00	8.87636E+01	8.87633E+01	0.00000E+00	-2.15994E-01	0.00000E+00	-3.05912E+00	9.00000E+01
1.20000E+00	8.72977E+01	8.72975E+01	0.00000E+00	-2.11868E-01	0.00000E+00	-3.11043E+00	9.00000E+01
1.23333E+00	8.58319E+01	8.58316E+01	0.00000E+00	-2.07804E-01	0.00000E+00	-3.16066E+00	9.00000E+01
1.26667E+00	8.43660E+01	8.43658E+01	0.00000E+00	-2.03687E-01	0.00000E+00	-3.20984E+00	9.00000E+01
1.30000E+00	8.29001E+01	8.28999E+01	0.00000E+00	-1.99422E-01	0.00000E+00	-3.25799E+00	9.00000E+01
1.33333E+00	8.14342E+01	8.14340E+01	0.00000E+00	-1.94926E-01	0.00000E+00	-3.30512E+00	9.00000E+01
1.36667E+00	7.99683E+01	7.99681E+01	0.00000E+00	-1.90131E-01	0.00000E+00	-3.35123E+00	9.00000E+01
1.40000E+00	7.85024E+01	7.85022E+01	0.00000E+00	-1.84988E-01	0.00000E+00	-3.39629E+00	9.00000E+01
1.43333E+00	7.70365E+01	7.70363E+01	0.00000E+00	-1.79470E-01	0.00000E+00	-3.44030E+00	9.00000E+01
1.46667E+00	7.55705E+01	7.55703E+01	0.00000E+00	-1.73570E-01	0.00000E+00	-3.48321E+00	9.00000E+01
1.50000E+00	7.41046E+01	7.41044E+01	0.00000E+00	-1.67298E-01	0.00000E+00	-3.52500E+00	9.00000E+01
1.53333E+00	7.26386E+01	7.26384E+01	0.00000E+00	-1.60685E-01	0.00000E+00	-3.56565E+00	9.00000E+01
1.56667E+00	7.11726E+01	7.11725E+01	0.00000E+00	-1.53781E-01	0.00000E+00	-3.60512E+00	9.00000E+01
1.60000E+00	6.97066E+01	6.97065E+01	0.00000E+00	-1.46651E-01	0.00000E+00	-3.64340E+00	9.00000E+01
1.63333E+00	6.82406E+01	6.82405E+01	0.00000E+00	-1.39373E-01	0.00000E+00	-3.68047E+00	9.00000E+01
1.66667E+00	6.67746E+01	6.67744E+01	0.00000E+00	-1.32034E-01	0.00000E+00	-3.71633E+00	9.00000E+01
1.70000E+00	6.53085E+01	6.53084E+01	0.00000E+00	-1.24728E-01	0.00000E+00	-3.75098E+00	9.00000E+01
1.73333E+00	6.38424E+01	6.38423E+01	0.00000E+00	-1.17552E-01	0.00000E+00	-3.78444E+00	9.00000E+01
1.76667E+00	6.23763E+01	6.23762E+01	0.00000E+00	-1.10602E-01	0.00000E+00	-3.81673E+00	9.00000E+01
1.80000E+00	6.09102E+01	6.09101E+01	0.00000E+00	-1.03968E-01	0.00000E+00	-3.84788E+00	9.00000E+01
1.83333E+00	5.94441E+01	5.94440E+01	0.00000E+00	-9.77325E-02	0.00000E+00	-3.87795E+00	9.00000E+01
1.86667E+00	5.79779E+01	5.79779E+01	0.00000E+00	-9.19675E-02	0.00000E+00	-3.90697E+00	9.00000E+01
1.90000E+00	5.65118E+01	5.65117E+01	0.00000E+00	-8.67303E-02	0.00000E+00	-3.93503E+00	9.00000E+01
1.93333E+00	5.50456E+01	5.50456E+01	0.00000E+00	-8.20623E-02	0.00000E+00	-3.96217E+00	9.00000E+01
1.96667E+00	5.35794E+01	5.35794E+01	0.00000E+00	-7.79883E-02	0.00000E+00	-3.98847E+00	9.00000E+01
2.00000E+00	5.21132E+01	5.21132E+01	0.00000E+00	-7.45174E-02	0.00000E+00	-4.01399E+00	9.00000E+01
2.03333E+00	5.06470E+01	5.06470E+01	0.00000E+00	-7.16434E-02	0.00000E+00	-4.03876E+00	9.00000E+01
2.06667E+00	4.91808E+01	4.91808E+01	0.00000E+00	-6.93411E-02	0.00000E+00	-4.06286E+00	9.00000E+01
2.10000E+00	4.77146E+01	4.77145E+01	0.00000E+00	-6.75638E-02	0.00000E+00	-4.08635E+00	9.00000E+01
2.13333E+00	4.62484E+01	4.62483E+01	0.00000E+00	-6.62474E-02	0.00000E+00	-4.10931E+00	9.00000E+01
2.16667E+00	4.47821E+01	4.47821E+01	0.00000E+00	-6.53147E-02	0.00000E+00	-4.13180E+00	9.00000E+01

2.20000E+00	4.33159E+01	4.33158E+01	0.00000E+00	-6.46776E-02	0.00000E+00	-4.15388E+00	9.00000E+01
2.23333E+00	4.18496E+01	4.18496E+01	0.00000E+00	-6.42404E-02	0.00000E+00	-4.17560E+00	9.00000E+01
2.26667E+00	4.03834E+01	4.03833E+01	0.00000E+00	-6.39036E-02	0.00000E+00	-4.19700E+00	9.00000E+01
2.30000E+00	3.89171E+01	3.89171E+01	0.00000E+00	-6.35682E-02	0.00000E+00	-4.21811E+00	9.00000E+01
2.33333E+00	3.74508E+01	3.74508E+01	0.00000E+00	-6.31386E-02	0.00000E+00	-4.23894E+00	9.00000E+01
2.36667E+00	3.59846E+01	3.59845E+01	0.00000E+00	-6.25263E-02	0.00000E+00	-4.25949E+00	9.00000E+01
2.40000E+00	3.45183E+01	3.45182E+01	0.00000E+00	-6.16495E-02	0.00000E+00	-4.27976E+00	9.00000E+01
2.43333E+00	3.30520E+01	3.30520E+01	0.00000E+00	-6.04443E-02	0.00000E+00	-4.29972E+00	9.00000E+01
2.46667E+00	3.15857E+01	3.15857E+01	0.00000E+00	-5.88615E-02	0.00000E+00	-4.31935E+00	9.00000E+01
2.50000E+00	3.01194E+01	3.01194E+01	0.00000E+00	-5.68683E-02	0.00000E+00	-4.33862E+00	9.00000E+01
2.53333E+00	2.86531E+01	2.86531E+01	0.00000E+00	-5.44506E-02	0.00000E+00	-4.35748E+00	9.00000E+01
2.56667E+00	2.71868E+01	2.71868E+01	0.00000E+00	-5.16135E-02	0.00000E+00	-4.37589E+00	9.00000E+01
2.60000E+00	2.57205E+01	2.57205E+01	0.00000E+00	-4.83890E-02	0.00000E+00	-4.39380E+00	9.00000E+01
2.63333E+00	2.42542E+01	2.42542E+01	0.00000E+00	-4.48020E-02	0.00000E+00	-4.41118E+00	9.00000E+01
2.66667E+00	2.27879E+01	2.27878E+01	0.00000E+00	-4.09126E-02	0.00000E+00	-4.42798E+00	9.00000E+01
2.70000E+00	2.13215E+01	2.13215E+01	0.00000E+00	-3.67894E-02	0.00000E+00	-4.44419E+00	9.00000E+01
2.73333E+00	1.98551E+01	1.98551E+01	0.00000E+00	-3.25124E-02	0.00000E+00	-4.45975E+00	9.00000E+01
2.76667E+00	1.83888E+01	1.83887E+01	0.00000E+00	-2.81680E-02	0.00000E+00	-4.47468E+00	9.00000E+01
2.80000E+00	1.69224E+01	1.69224E+01	0.00000E+00	-2.38454E-02	0.00000E+00	-4.48894E+00	9.00000E+01
2.83333E+00	1.54560E+01	1.54560E+01	0.00000E+00	-1.96351E-02	0.00000E+00	-4.50255E+00	9.00000E+01
2.86667E+00	1.39896E+01	1.39896E+01	0.00000E+00	-1.56248E-02	0.00000E+00	-4.51553E+00	9.00000E+01
2.90000E+00	1.25232E+01	1.25231E+01	0.00000E+00	-1.18964E-02	0.00000E+00	-4.52788E+00	9.00000E+01
2.93333E+00	1.10567E+01	1.10567E+01	0.00000E+00	-8.52516E-03	0.00000E+00	-4.53965E+00	9.00000E+01
2.96667E+00	9.59028E+00	9.59028E+00	0.00000E+00	-5.57025E-03	0.00000E+00	-4.55087E+00	9.00000E+01
3.00000E+00	8.12383E+00	8.12383E+00	0.00000E+00	-3.07742E-03	0.00000E+00	-4.56159E+00	9.00000E+01
3.03333E+00	6.65737E+00	6.65737E+00	0.00000E+00	-1.07700E-03	0.00000E+00	-4.57187E+00	9.00000E+01
3.06667E+00	5.19090E+00	5.19090E+00	0.00000E+00	4.17620E-04	0.00000E+00	-4.58176E+00	9.00000E+01
3.10000E+00	3.72443E+00	3.72443E+00	0.00000E+00	1.41113E-03	0.00000E+00	-4.59133E+00	9.00000E+01
3.13333E+00	2.25954E+00	2.25954E+00	0.00000E+00	4.07359E-03	0.00000E+00	-4.60579E+00	9.00000E+01
3.16667E+00	8.31607E-01	8.30024E-01	0.00000E+00	5.12977E-02	0.00000E+00	-4.71147E+00	9.00000E+01
3.20000E+00	6.00909E-01	-5.95375E-01	0.00000E+00	8.13676E-02	0.00000E+00	-4.74291E+00	9.00000E+01
3.23333E+00	2.02852E+00	-2.02676E+00	0.00000E+00	8.44467E-02	0.00000E+00	-4.70954E+00	9.00000E+01
3.26667E+00	3.45344E+00	-3.45241E+00	0.00000E+00	8.42601E-02	0.00000E+00	-4.68547E+00	9.00000E+01
3.30000E+00	4.86881E+00	-4.86806E+00	0.00000E+00	8.53415E-02	0.00000E+00	-4.70092E+00	9.00000E+01
3.33333E+00	6.16178E+00	-6.15921E+00	0.00000E+00	1.77905E-01	0.00000E+00	-6.03910E+00	9.00000E+01
3.36667E+00	7.15745E+00	-7.13582E+00	0.00000E+00	5.56024E-01	0.00000E+00	-1.12162E+01	9.00000E+01
3.40000E+00	7.97076E+00	-7.89077E+00	0.00000E+00	1.12643E+00	0.00000E+00	-1.89897E+01	9.00000E+01
3.43333E+00	8.77199E+00	-8.62561E+00	0.00000E+00	1.59587E+00	0.00000E+00	-2.56629E+01	9.00000E+01
3.46667E+00	9.60622E+00	-9.41233E+00	0.00000E+00	1.92028E+00	0.00000E+00	-3.04751E+01	9.00000E+01
3.50000E+00	1.04702E+01	-1.02476E+01	0.00000E+00	2.14752E+00	0.00000E+00	-3.39278E+01	9.00000E+01
3.53333E+00	1.13612E+01	-1.11243E+01	0.00000E+00	2.30779E+00	0.00000E+00	-3.63619E+01	9.00000E+01
3.56667E+00	1.22818E+01	-1.20397E+01	0.00000E+00	2.42639E+00	0.00000E+00	-3.78797E+01	9.00000E+01
3.60000E+00	1.32352E+01	-1.29918E+01	0.00000E+00	2.52662E+00	0.00000E+00	-3.85228E+01	9.00000E+01
3.63333E+00	1.42230E+01	-1.39791E+01	0.00000E+00	2.62233E+00	0.00000E+00	-3.83880E+01	9.00000E+01
3.66667E+00	1.52296E+01	-1.49886E+01	0.00000E+00	2.69889E+00	0.00000E+00	-3.78771E+01	9.00000E+01
3.70000E+00	1.62372E+01	-1.60046E+01	0.00000E+00	2.73894E+00	0.00000E+00	-3.72916E+01	9.00000E+01
3.73333E+00	1.72430E+01	-1.70240E+01	0.00000E+00	2.73926E+00	0.00000E+00	-3.66581E+01	9.00000E+01
3.76667E+00	1.82479E+01	-1.80466E+01	0.00000E+00	2.70248E+00	0.00000E+00	-3.59659E+01	9.00000E+01
3.80000E+00	1.92522E+01	-1.90714E+01	0.00000E+00	2.63173E+00	0.00000E+00	-3.52284E+01	9.00000E+01
3.83333E+00	2.02548E+01	-2.00962E+01	0.00000E+00	2.52949E+00	0.00000E+00	-3.44785E+01	9.00000E+01
3.86667E+00	2.12513E+01	-2.11156E+01	0.00000E+00	2.39767E+00	0.00000E+00	-3.38717E+01	9.00000E+01
3.90000E+00	2.22520E+01	-2.21385E+01	0.00000E+00	2.24527E+00	0.00000E+00	-3.34803E+01	9.00000E+01
3.93333E+00	2.32632E+01	-2.31702E+01	0.00000E+00	2.07799E+00	0.00000E+00	-3.31383E+01	9.00000E+01
3.96667E+00	2.42831E+01	-2.42093E+01	0.00000E+00	1.89153E+00	0.00000E+00	-3.27476E+01	9.00000E+01

4.00000E+00	2.53108E+01	-2.52549E+01	0.00000E+00	1.68122E+00	0.00000E+00	-3.23045E+01	9.00000E+01
4.03333E+00	2.63473E+01	-2.63065E+01	0.00000E+00	1.46420E+00	0.00000E+00	-3.18137E+01	9.00000E+01
4.06667E+00	2.73927E+01	-2.73637E+01	0.00000E+00	1.25951E+00	0.00000E+00	-3.12828E+01	9.00000E+01
4.10000E+00	2.84459E+01	-2.84258E+01	0.00000E+00	1.07063E+00	0.00000E+00	-3.07180E+01	9.00000E+01
4.13333E+00	2.95059E+01	-2.94923E+01	0.00000E+00	8.97310E-01	0.00000E+00	-3.01251E+01	9.00000E+01
4.16667E+00	3.05716E+01	-3.05627E+01	0.00000E+00	7.39023E-01	0.00000E+00	-2.95104E+01	9.00000E+01
4.20000E+00	3.16422E+01	-3.16366E+01	0.00000E+00	5.95568E-01	0.00000E+00	-2.88785E+01	9.00000E+01
4.23333E+00	3.27170E+01	-3.27137E+01	0.00000E+00	4.66855E-01	0.00000E+00	-2.82344E+01	9.00000E+01
4.26667E+00	3.37954E+01	-3.37936E+01	0.00000E+00	3.52852E-01	0.00000E+00	-2.75827E+01	9.00000E+01
4.30000E+00	3.48768E+01	-3.48759E+01	0.00000E+00	2.53509E-01	0.00000E+00	-2.69281E+01	9.00000E+01
4.33333E+00	3.59608E+01	-3.59604E+01	0.00000E+00	1.68683E-01	0.00000E+00	-2.62745E+01	9.00000E+01
4.36667E+00	3.70469E+01	-3.70468E+01	0.00000E+00	9.80702E-02	0.00000E+00	-2.56258E+01	9.00000E+01
4.40000E+00	3.81349E+01	-3.81349E+01	0.00000E+00	4.13198E-02	0.00000E+00	-2.49842E+01	9.00000E+01
4.43333E+00	3.92245E+01	-3.92245E+01	0.00000E+00	-2.28633E-03	0.00000E+00	-2.43532E+01	9.00000E+01
4.46667E+00	4.03154E+01	-4.03154E+01	0.00000E+00	-3.37186E-02	0.00000E+00	-2.37353E+01	9.00000E+01
4.50000E+00	4.14075E+01	-4.14074E+01	0.00000E+00	-5.41387E-02	0.00000E+00	-2.31320E+01	9.00000E+01
4.53333E+00	4.25006E+01	-4.25005E+01	0.00000E+00	-6.48402E-02	0.00000E+00	-2.25444E+01	9.00000E+01
4.56667E+00	4.35946E+01	-4.35945E+01	0.00000E+00	-6.71814E-02	0.00000E+00	-2.19731E+01	9.00000E+01
4.60000E+00	4.46895E+01	-4.46895E+01	0.00000E+00	-6.25293E-02	0.00000E+00	-2.14184E+01	9.00000E+01
4.63333E+00	4.57852E+01	-4.57852E+01	0.00000E+00	-5.22243E-02	0.00000E+00	-2.08805E+01	9.00000E+01
4.66667E+00	4.68817E+01	-4.68817E+01	0.00000E+00	-3.75446E-02	0.00000E+00	-2.03591E+01	9.00000E+01
4.70000E+00	4.79790E+01	-4.79790E+01	0.00000E+00	-1.96723E-02	0.00000E+00	-1.98540E+01	9.00000E+01
4.73333E+00	4.90770E+01	-4.90770E+01	0.00000E+00	3.31949E-04	0.00000E+00	-1.93648E+01	9.00000E+01
4.76667E+00	5.01758E+01	-5.01758E+01	0.00000E+00	2.15423E-02	0.00000E+00	-1.88911E+01	9.00000E+01
4.80000E+00	5.12752E+01	-5.12751E+01	0.00000E+00	4.31714E-02	0.00000E+00	-1.84325E+01	9.00000E+01
4.83333E+00	5.23752E+01	-5.23752E+01	0.00000E+00	6.45355E-02	0.00000E+00	-1.79885E+01	9.00000E+01
4.86667E+00	5.34759E+01	-5.34759E+01	0.00000E+00	8.51493E-02	0.00000E+00	-1.75589E+01	9.00000E+01
4.90000E+00	5.45773E+01	-5.45772E+01	0.00000E+00	1.04615E-01	0.00000E+00	-1.71432E+01	9.00000E+01
4.93333E+00	5.56792E+01	-5.56791E+01	0.00000E+00	1.22641E-01	0.00000E+00	-1.67410E+01	9.00000E+01
4.96667E+00	5.67817E+01	-5.67815E+01	0.00000E+00	1.39030E-01	0.00000E+00	-1.63519E+01	9.00000E+01
5.00000E+00	5.78848E+01	-5.78846E+01	0.00000E+00	1.53669E-01	0.00000E+00	-1.59756E+01	9.00000E+01
5.03333E+00	5.89884E+01	-5.89881E+01	0.00000E+00	1.66517E-01	0.00000E+00	-1.56116E+01	9.00000E+01
5.06667E+00	6.00925E+01	-6.00923E+01	0.00000E+00	1.77590E-01	0.00000E+00	-1.52598E+01	9.00000E+01
5.10000E+00	6.11972E+01	-6.11969E+01	0.00000E+00	1.86947E-01	0.00000E+00	-1.49196E+01	9.00000E+01
5.13333E+00	6.23024E+01	-6.23021E+01	0.00000E+00	1.94680E-01	0.00000E+00	-1.45907E+01	9.00000E+01
5.16667E+00	6.34080E+01	-6.34077E+01	0.00000E+00	2.00908E-01	0.00000E+00	-1.42729E+01	9.00000E+01
5.20000E+00	6.45142E+01	-6.45138E+01	0.00000E+00	2.05765E-01	0.00000E+00	-1.39657E+01	9.00000E+01
5.23333E+00	6.56208E+01	-6.56204E+01	0.00000E+00	2.09396E-01	0.00000E+00	-1.36689E+01	9.00000E+01
5.26667E+00	6.67279E+01	-6.67275E+01	0.00000E+00	2.11949E-01	0.00000E+00	-1.33822E+01	9.00000E+01
5.30000E+00	6.78354E+01	-6.78350E+01	0.00000E+00	2.13569E-01	0.00000E+00	-1.31051E+01	9.00000E+01
5.33333E+00	6.89434E+01	-6.89430E+01	0.00000E+00	2.14396E-01	0.00000E+00	-1.28375E+01	9.00000E+01
5.36667E+00	7.00518E+01	-7.00514E+01	0.00000E+00	2.14562E-01	0.00000E+00	-1.25790E+01	9.00000E+01
5.40000E+00	7.11606E+01	-7.11603E+01	0.00000E+00	2.14191E-01	0.00000E+00	-1.23294E+01	9.00000E+01
5.43333E+00	7.22699E+01	-7.22695E+01	0.00000E+00	2.13393E-01	0.00000E+00	-1.20883E+01	9.00000E+01
5.46667E+00	7.33795E+01	-7.33792E+01	0.00000E+00	2.12265E-01	0.00000E+00	-1.18555E+01	9.00000E+01
5.50000E+00	7.44896E+01	-7.44893E+01	0.00000E+00	2.10892E-01	0.00000E+00	-1.16308E+01	9.00000E+01
5.53333E+00	7.56001E+01	-7.55998E+01	0.00000E+00	2.09349E-01	0.00000E+00	-1.14138E+01	9.00000E+01
5.56667E+00	7.67109E+01	-7.67106E+01	0.00000E+00	2.07695E-01	0.00000E+00	-1.12043E+01	9.00000E+01
5.60000E+00	7.78221E+01	-7.78219E+01	0.00000E+00	2.05982E-01	0.00000E+00	-1.10020E+01	9.00000E+01
5.63333E+00	7.89338E+01	-7.89335E+01	0.00000E+00	2.04247E-01	0.00000E+00	-1.08068E+01	9.00000E+01
5.66667E+00	8.00457E+01	-8.00455E+01	0.00000E+00	2.02519E-01	0.00000E+00	-1.06183E+01	9.00000E+01
5.70000E+00	8.11581E+01	-8.11579E+01	0.00000E+00	2.00820E-01	0.00000E+00	-1.04363E+01	9.00000E+01
5.73333E+00	8.22708E+01	-8.22706E+01	0.00000E+00	1.99163E-01	0.00000E+00	-1.02606E+01	9.00000E+01
5.76667E+00	8.33839E+01	-8.33836E+01	0.00000E+00	1.97557E-01	0.00000E+00	-1.00910E+01	9.00000E+01

5.80000E+00	8.44973E+01	-8.44971E+01	0.00000E+00	1.96004E-01	0.00000E+00	-9.92719E+00	9.00000E+01
5.83333E+00	8.56111E+01	-8.56108E+01	0.00000E+00	1.94504E-01	0.00000E+00	-9.76904E+00	9.00000E+01
5.86667E+00	8.67252E+01	-8.67249E+01	0.00000E+00	1.93053E-01	0.00000E+00	-9.61633E+00	9.00000E+01
5.90000E+00	8.78396E+01	-8.78394E+01	0.00000E+00	1.91643E-01	0.00000E+00	-9.46884E+00	9.00000E+01
5.93333E+00	8.89543E+01	-8.89541E+01	0.00000E+00	1.90269E-01	0.00000E+00	-9.32640E+00	9.00000E+01
5.96667E+00	9.00694E+01	-9.00692E+01	0.00000E+00	1.88921E-01	0.00000E+00	-9.18881E+00	9.00000E+01
6.00000E+00	9.11848E+01	-9.11846E+01	0.00000E+00	1.87592E-01	0.00000E+00	-9.05590E+00	9.00000E+01

1Boat 30 mph
Request Number 32044

Force exerted on Marker 20003 by Marker 3200

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	1.74140E+03	1.69031E+03	0.00000E+00	4.18745E+02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

3.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

5.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 32051

Displacement of Marker 20005 relative to Marker 3200

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	1.40791E+02	1.40787E+02	0.00000E+00	-1.02100E+00	0.00000E+00	0.00000E+00	9.00000E+01
3.33333E-02	1.39324E+02	1.39320E+02	0.00000E+00	-1.01054E+00	0.00000E+00	-4.79338E-02	9.00000E+01
6.66667E-02	1.37858E+02	1.37854E+02	0.00000E+00	-9.85607E-01	0.00000E+00	-1.55993E-01	9.00000E+01
1.00000E-01	1.36391E+02	1.36388E+02	0.00000E+00	-9.52362E-01	0.00000E+00	-2.92789E-01	9.00000E+01
1.33333E-01	1.34925E+02	1.34922E+02	0.00000E+00	-9.14957E-01	0.00000E+00	-4.40091E-01	9.00000E+01
1.66667E-01	1.33459E+02	1.33456E+02	0.00000E+00	-8.76028E-01	0.00000E+00	-5.88407E-01	9.00000E+01
2.00000E-01	1.31993E+02	1.31990E+02	0.00000E+00	-8.37237E-01	0.00000E+00	-7.33209E-01	9.00000E+01
2.33333E-01	1.30527E+02	1.30524E+02	0.00000E+00	-8.00121E-01	0.00000E+00	-8.71037E-01	9.00000E+01
2.66667E-01	1.29061E+02	1.29058E+02	0.00000E+00	-7.65503E-01	0.00000E+00	-1.00100E+00	9.00000E+01
3.00000E-01	1.27594E+02	1.27592E+02	0.00000E+00	-7.33791E-01	0.00000E+00	-1.12335E+00	9.00000E+01
3.33333E-01	1.26128E+02	1.26126E+02	0.00000E+00	-7.05216E-01	0.00000E+00	-1.23864E+00	9.00000E+01
3.66667E-01	1.24662E+02	1.24660E+02	0.00000E+00	-6.79758E-01	0.00000E+00	-1.34755E+00	9.00000E+01
4.00000E-01	1.23196E+02	1.23194E+02	0.00000E+00	-6.57349E-01	0.00000E+00	-1.45068E+00	9.00000E+01
4.33333E-01	1.21730E+02	1.21729E+02	0.00000E+00	-6.37833E-01	0.00000E+00	-1.54857E+00	9.00000E+01
4.66667E-01	1.20264E+02	1.20263E+02	0.00000E+00	-6.20991E-01	0.00000E+00	-1.64181E+00	9.00000E+01
5.00000E-01	1.18798E+02	1.18797E+02	0.00000E+00	-6.06567E-01	0.00000E+00	-1.73090E+00	9.00000E+01
5.33333E-01	1.17332E+02	1.17331E+02	0.00000E+00	-5.94295E-01	0.00000E+00	-1.81631E+00	9.00000E+01

5.66667E-01	1.15866E+02	1.15865E+02	0.00000E+00	-5.83845E-01	0.00000E+00	-1.89852E+00	9.00000E+01
6.00000E-01	1.14400E+02	1.14399E+02	0.00000E+00	-5.74914E-01	0.00000E+00	-1.97793E+00	9.00000E+01
6.33333E-01	1.12934E+02	1.12933E+02	0.00000E+00	-5.67223E-01	0.00000E+00	-2.05485E+00	9.00000E+01
6.66667E-01	1.11468E+02	1.11467E+02	0.00000E+00	-5.60510E-01	0.00000E+00	-2.12954E+00	9.00000E+01
7.00000E-01	1.10002E+02	1.10001E+02	0.00000E+00	-5.54534E-01	0.00000E+00	-2.20222E+00	9.00000E+01
7.33333E-01	1.08536E+02	1.08534E+02	0.00000E+00	-5.49093E-01	0.00000E+00	-2.27306E+00	9.00000E+01
7.66667E-01	1.07070E+02	1.07068E+02	0.00000E+00	-5.44012E-01	0.00000E+00	-2.34219E+00	9.00000E+01
8.00000E-01	1.05604E+02	1.05602E+02	0.00000E+00	-5.39144E-01	0.00000E+00	-2.40972E+00	9.00000E+01
8.33333E-01	1.04138E+02	1.04136E+02	0.00000E+00	-5.34372E-01	0.00000E+00	-2.47572E+00	9.00000E+01
8.66667E-01	1.02672E+02	1.02670E+02	0.00000E+00	-5.29605E-01	0.00000E+00	-2.54026E+00	9.00000E+01
9.00000E-01	1.01206E+02	1.01204E+02	0.00000E+00	-5.24777E-01	0.00000E+00	-2.60337E+00	9.00000E+01
9.33333E-01	9.97396E+01	9.97383E+01	0.00000E+00	-5.19843E-01	0.00000E+00	-2.66508E+00	9.00000E+01
9.66667E-01	9.82736E+01	9.82722E+01	0.00000E+00	-5.14781E-01	0.00000E+00	-2.72539E+00	9.00000E+01
1.00000E+00	9.68075E+01	9.68062E+01	0.00000E+00	-5.09580E-01	0.00000E+00	-2.78433E+00	9.00000E+01
1.03333E+00	9.53415E+01	9.53401E+01	0.00000E+00	-5.04395E-01	0.00000E+00	-2.84191E+00	9.00000E+01
1.06667E+00	9.38754E+01	9.38741E+01	0.00000E+00	-4.99495E-01	0.00000E+00	-2.89813E+00	9.00000E+01
1.10000E+00	9.24093E+01	9.24080E+01	0.00000E+00	-4.95061E-01	0.00000E+00	-2.95303E+00	9.00000E+01
1.13333E+00	9.09433E+01	9.09419E+01	0.00000E+00	-4.91073E-01	0.00000E+00	-3.00668E+00	9.00000E+01
1.16667E+00	8.94772E+01	8.94758E+01	0.00000E+00	-4.87406E-01	0.00000E+00	-3.05912E+00	9.00000E+01
1.20000E+00	8.80111E+01	8.80098E+01	0.00000E+00	-4.83918E-01	0.00000E+00	-3.11043E+00	9.00000E+01
1.23333E+00	8.65450E+01	8.65437E+01	0.00000E+00	-4.80478E-01	0.00000E+00	-3.16066E+00	9.00000E+01
1.26667E+00	8.50789E+01	8.50776E+01	0.00000E+00	-4.76973E-01	0.00000E+00	-3.20984E+00	9.00000E+01
1.30000E+00	8.36128E+01	8.36115E+01	0.00000E+00	-4.73305E-01	0.00000E+00	-3.25799E+00	9.00000E+01
1.33333E+00	8.21467E+01	8.21454E+01	0.00000E+00	-4.69395E-01	0.00000E+00	-3.30512E+00	9.00000E+01
1.36667E+00	8.06806E+01	8.06792E+01	0.00000E+00	-4.65172E-01	0.00000E+00	-3.35123E+00	9.00000E+01
1.40000E+00	7.92145E+01	7.92131E+01	0.00000E+00	-4.60589E-01	0.00000E+00	-3.39629E+00	9.00000E+01
1.43333E+00	7.77483E+01	7.77470E+01	0.00000E+00	-4.55617E-01	0.00000E+00	-3.44030E+00	9.00000E+01
1.46667E+00	7.62822E+01	7.62808E+01	0.00000E+00	-4.50248E-01	0.00000E+00	-3.48321E+00	9.00000E+01
1.50000E+00	7.48160E+01	7.48147E+01	0.00000E+00	-4.44494E-01	0.00000E+00	-3.52500E+00	9.00000E+01
1.53333E+00	7.33498E+01	7.33485E+01	0.00000E+00	-4.38386E-01	0.00000E+00	-3.56565E+00	9.00000E+01
1.56667E+00	7.18837E+01	7.18824E+01	0.00000E+00	-4.31971E-01	0.00000E+00	-3.60512E+00	9.00000E+01
1.60000E+00	7.04175E+01	7.04162E+01	0.00000E+00	-4.25315E-01	0.00000E+00	-3.64340E+00	9.00000E+01
1.63333E+00	6.89513E+01	6.89500E+01	0.00000E+00	-4.18496E-01	0.00000E+00	-3.68047E+00	9.00000E+01
1.66667E+00	6.74850E+01	6.74838E+01	0.00000E+00	-4.11601E-01	0.00000E+00	-3.71633E+00	9.00000E+01
1.70000E+00	6.60188E+01	6.60176E+01	0.00000E+00	-4.04724E-01	0.00000E+00	-3.75098E+00	9.00000E+01
1.73333E+00	6.45526E+01	6.45513E+01	0.00000E+00	-3.97962E-01	0.00000E+00	-3.78444E+00	9.00000E+01
1.76667E+00	6.30863E+01	6.30851E+01	0.00000E+00	-3.91411E-01	0.00000E+00	-3.81673E+00	9.00000E+01
1.80000E+00	6.16201E+01	6.16189E+01	0.00000E+00	-3.85163E-01	0.00000E+00	-3.84788E+00	9.00000E+01
1.83333E+00	6.01538E+01	6.01526E+01	0.00000E+00	-3.79299E-01	0.00000E+00	-3.87795E+00	9.00000E+01
1.86667E+00	5.86875E+01	5.86863E+01	0.00000E+00	-3.73893E-01	0.00000E+00	-3.90697E+00	9.00000E+01
1.90000E+00	5.72212E+01	5.72200E+01	0.00000E+00	-3.69003E-01	0.00000E+00	-3.93503E+00	9.00000E+01
1.93333E+00	5.57549E+01	5.57537E+01	0.00000E+00	-3.64671E-01	0.00000E+00	-3.96217E+00	9.00000E+01
1.96667E+00	5.42886E+01	5.42874E+01	0.00000E+00	-3.60922E-01	0.00000E+00	-3.98847E+00	9.00000E+01
2.00000E+00	5.28223E+01	5.28211E+01	0.00000E+00	-3.57766E-01	0.00000E+00	-4.01399E+00	9.00000E+01
2.03333E+00	5.13560E+01	5.13548E+01	0.00000E+00	-3.55198E-01	0.00000E+00	-4.03876E+00	9.00000E+01
2.06667E+00	4.98897E+01	4.98884E+01	0.00000E+00	-3.53193E-01	0.00000E+00	-4.06286E+00	9.00000E+01
2.10000E+00	4.84234E+01	4.84221E+01	0.00000E+00	-3.51706E-01	0.00000E+00	-4.08635E+00	9.00000E+01
2.13333E+00	4.69571E+01	4.69557E+01	0.00000E+00	-3.50673E-01	0.00000E+00	-4.10931E+00	9.00000E+01
2.16667E+00	4.54907E+01	4.54894E+01	0.00000E+00	-3.50018E-01	0.00000E+00	-4.13180E+00	9.00000E+01
2.20000E+00	4.40244E+01	4.40230E+01	0.00000E+00	-3.49654E-01	0.00000E+00	-4.15388E+00	9.00000E+01
2.23333E+00	4.25581E+01	4.25567E+01	0.00000E+00	-3.49485E-01	0.00000E+00	-4.17560E+00	9.00000E+01
2.26667E+00	4.10918E+01	4.10903E+01	0.00000E+00	-3.49412E-01	0.00000E+00	-4.19700E+00	9.00000E+01
2.30000E+00	3.96255E+01	3.96239E+01	0.00000E+00	-3.49337E-01	0.00000E+00	-4.21811E+00	9.00000E+01
2.33333E+00	3.81592E+01	3.81576E+01	0.00000E+00	-3.49164E-01	0.00000E+00	-4.23894E+00	9.00000E+01

2.36667E+00	3.66929E+01	3.66912E+01	0.00000E+00	-3.48805E-01	0.00000E+00	-4.25949E+00	9.00000E+01
2.40000E+00	3.52266E+01	3.52248E+01	0.00000E+00	-3.48179E-01	0.00000E+00	-4.27976E+00	9.00000E+01
2.43333E+00	3.37602E+01	3.37585E+01	0.00000E+00	-3.47220E-01	0.00000E+00	-4.29972E+00	9.00000E+01
2.46667E+00	3.22939E+01	3.22921E+01	0.00000E+00	-3.45879E-01	0.00000E+00	-4.31935E+00	9.00000E+01
2.50000E+00	3.08276E+01	3.08257E+01	0.00000E+00	-3.44123E-01	0.00000E+00	-4.33862E+00	9.00000E+01
2.53333E+00	2.93613E+01	2.93593E+01	0.00000E+00	-3.41938E-01	0.00000E+00	-4.35748E+00	9.00000E+01
2.56667E+00	2.78950E+01	2.78929E+01	0.00000E+00	-3.39328E-01	0.00000E+00	-4.37589E+00	9.00000E+01
2.60000E+00	2.64286E+01	2.64265E+01	0.00000E+00	-3.36324E-01	0.00000E+00	-4.39380E+00	9.00000E+01
2.63333E+00	2.49623E+01	2.49601E+01	0.00000E+00	-3.32951E-01	0.00000E+00	-4.41118E+00	9.00000E+01
2.66667E+00	2.34960E+01	2.34937E+01	0.00000E+00	-3.29269E-01	0.00000E+00	-4.42798E+00	9.00000E+01
2.70000E+00	2.20296E+01	2.20272E+01	0.00000E+00	-3.25345E-01	0.00000E+00	-4.44419E+00	9.00000E+01
2.73333E+00	2.05633E+01	2.05608E+01	0.00000E+00	-3.21260E-01	0.00000E+00	-4.45975E+00	9.00000E+01
2.76667E+00	1.90970E+01	1.90944E+01	0.00000E+00	-3.17099E-01	0.00000E+00	-4.47468E+00	9.00000E+01
2.80000E+00	1.76307E+01	1.76279E+01	0.00000E+00	-3.12952E-01	0.00000E+00	-4.48894E+00	9.00000E+01
2.83333E+00	1.61644E+01	1.61614E+01	0.00000E+00	-3.08910E-01	0.00000E+00	-4.50255E+00	9.00000E+01
2.86667E+00	1.46981E+01	1.46950E+01	0.00000E+00	-3.05059E-01	0.00000E+00	-4.51553E+00	9.00000E+01
2.90000E+00	1.32319E+01	1.32285E+01	0.00000E+00	-3.01483E-01	0.00000E+00	-4.52788E+00	9.00000E+01
2.93333E+00	1.17658E+01	1.17620E+01	0.00000E+00	-2.98256E-01	0.00000E+00	-4.53965E+00	9.00000E+01
2.96667E+00	1.02997E+01	1.02955E+01	0.00000E+00	-2.95440E-01	0.00000E+00	-4.55087E+00	9.00000E+01
3.00000E+00	8.83386E+00	8.82900E+00	0.00000E+00	-2.93079E-01	0.00000E+00	-4.56159E+00	9.00000E+01
3.03333E+00	7.36824E+00	7.36249E+00	0.00000E+00	-2.91205E-01	0.00000E+00	-4.57187E+00	9.00000E+01
3.06667E+00	5.90309E+00	5.89597E+00	0.00000E+00	-2.89832E-01	0.00000E+00	-4.58176E+00	9.00000E+01
3.10000E+00	4.43886E+00	4.42945E+00	0.00000E+00	-2.88956E-01	0.00000E+00	-4.59133E+00	9.00000E+01
3.13333E+00	2.97828E+00	2.96447E+00	0.00000E+00	-2.86505E-01	0.00000E+00	-4.60579E+00	9.00000E+01
3.16667E+00	1.55296E+00	1.53409E+00	0.00000E+00	-2.41363E-01	0.00000E+00	-4.71147E+00	9.00000E+01
3.20000E+00	2.38327E-01	1.08270E-01	0.00000E+00	-2.12314E-01	0.00000E+00	-4.74291E+00	9.00000E+01
3.23333E+00	1.33946E+00	-1.32304E+00	0.00000E+00	-2.09053E-01	0.00000E+00	-4.70954E+00	9.00000E+01
3.26667E+00	2.75656E+00	-2.74862E+00	0.00000E+00	-2.09082E-01	0.00000E+00	-4.68547E+00	9.00000E+01
3.30000E+00	4.16951E+00	-4.16431E+00	0.00000E+00	-2.08090E-01	0.00000E+00	-4.70092E+00	9.00000E+01
3.33333E+00	5.45957E+00	-5.45820E+00	0.00000E+00	-1.22018E-01	0.00000E+00	-6.03910E+00	9.00000E+01
3.36667E+00	6.44940E+00	-6.44519E+00	0.00000E+00	2.32924E-01	0.00000E+00	-1.12162E+01	9.00000E+01
3.40000E+00	7.25624E+00	-7.21490E+00	0.00000E+00	7.73482E-01	0.00000E+00	-1.89897E+01	9.00000E+01
3.43333E+00	8.05370E+00	-7.96022E+00	0.00000E+00	1.22355E+00	0.00000E+00	-2.56629E+01	9.00000E+01
3.46667E+00	8.88651E+00	-8.75231E+00	0.00000E+00	1.53853E+00	0.00000E+00	-3.04751E+01	9.00000E+01
3.50000E+00	9.75052E+00	-9.59009E+00	0.00000E+00	1.76148E+00	0.00000E+00	-3.39278E+01	9.00000E+01
3.53333E+00	1.06425E+01	-1.04678E+01	0.00000E+00	1.92001E+00	0.00000E+00	-3.63619E+01	9.00000E+01
3.56667E+00	1.15644E+01	-1.13833E+01	0.00000E+00	2.03851E+00	0.00000E+00	-3.78797E+01	9.00000E+01
3.60000E+00	1.25190E+01	-1.23347E+01	0.00000E+00	2.13988E+00	0.00000E+00	-3.85228E+01	9.00000E+01
3.63333E+00	1.35075E+01	-1.33208E+01	0.00000E+00	2.23763E+00	0.00000E+00	-3.83880E+01	9.00000E+01
3.66667E+00	1.45152E+01	-1.43292E+01	0.00000E+00	2.31600E+00	0.00000E+00	-3.78771E+01	9.00000E+01
3.70000E+00	1.55246E+01	-1.53447E+01	0.00000E+00	2.35700E+00	0.00000E+00	-3.72916E+01	9.00000E+01
3.73333E+00	1.65328E+01	-1.63638E+01	0.00000E+00	2.35775E+00	0.00000E+00	-3.66581E+01	9.00000E+01
3.76667E+00	1.75406E+01	-1.73864E+01	0.00000E+00	2.32118E+00	0.00000E+00	-3.59659E+01	9.00000E+01
3.80000E+00	1.85481E+01	-1.84111E+01	0.00000E+00	2.25054E+00	0.00000E+00	-3.52284E+01	9.00000E+01
3.83333E+00	1.95541E+01	-1.94357E+01	0.00000E+00	2.14846E+00	0.00000E+00	-3.44785E+01	9.00000E+01
3.86667E+00	2.05538E+01	-2.04545E+01	0.00000E+00	2.01775E+00	0.00000E+00	-3.38717E+01	9.00000E+01
3.90000E+00	2.15574E+01	-2.14764E+01	0.00000E+00	1.86714E+00	0.00000E+00	-3.34803E+01	9.00000E+01
3.93333E+00	2.25716E+01	-2.25074E+01	0.00000E+00	1.70110E+00	0.00000E+00	-3.31383E+01	9.00000E+01
3.96667E+00	2.35949E+01	-2.35462E+01	0.00000E+00	1.51524E+00	0.00000E+00	-3.27476E+01	9.00000E+01
4.00000E+00	2.46262E+01	-2.45915E+01	0.00000E+00	1.30528E+00	0.00000E+00	-3.23045E+01	9.00000E+01
4.03333E+00	2.56661E+01	-2.56430E+01	0.00000E+00	1.08852E+00	0.00000E+00	-3.18137E+01	9.00000E+01
4.06667E+00	2.67147E+01	-2.67000E+01	0.00000E+00	8.84128E-01	0.00000E+00	-3.12828E+01	9.00000E+01
4.10000E+00	2.77706E+01	-2.77619E+01	0.00000E+00	6.95654E-01	0.00000E+00	-3.07180E+01	9.00000E+01
4.13333E+00	2.88328E+01	-2.88281E+01	0.00000E+00	5.22901E-01	0.00000E+00	-3.01251E+01	9.00000E+01
4.16667E+00	2.99003E+01	-2.98981E+01	0.00000E+00	3.65342E-01	0.00000E+00	-2.95104E+01	9.00000E+01

4.20000E+00	3.09723E+01	-3.09715E+01	0.00000E+00	2.22775E-01	0.00000E+00	-2.88785E+01	9.00000E+01
4.23333E+00	3.20481E+01	-3.20480E+01	0.00000E+00	9.50970E-02	0.00000E+00	-2.82344E+01	9.00000E+01
4.26667E+00	3.31272E+01	-3.31272E+01	0.00000E+00	-1.77460E-02	0.00000E+00	-2.75827E+01	9.00000E+01
4.30000E+00	3.42091E+01	-3.42089E+01	0.00000E+00	-1.15830E-01	0.00000E+00	-2.69281E+01	9.00000E+01
4.33333E+00	3.52932E+01	-3.52926E+01	0.00000E+00	-1.99325E-01	0.00000E+00	-2.62745E+01	9.00000E+01
4.36667E+00	3.63793E+01	-3.63783E+01	0.00000E+00	-2.68562E-01	0.00000E+00	-2.56258E+01	9.00000E+01
4.40000E+00	3.74670E+01	-3.74656E+01	0.00000E+00	-3.23909E-01	0.00000E+00	-2.49842E+01	9.00000E+01
4.43333E+00	3.85562E+01	-3.85545E+01	0.00000E+00	-3.66112E-01	0.00000E+00	-2.43532E+01	9.00000E+01
4.46667E+00	3.96466E+01	-3.96446E+01	0.00000E+00	-3.96157E-01	0.00000E+00	-2.37353E+01	9.00000E+01
4.50000E+00	4.07380E+01	-4.07359E+01	0.00000E+00	-4.15217E-01	0.00000E+00	-2.31320E+01	9.00000E+01
4.53333E+00	4.18304E+01	-4.18282E+01	0.00000E+00	-4.24590E-01	0.00000E+00	-2.25444E+01	9.00000E+01
4.56667E+00	4.29237E+01	-4.29216E+01	0.00000E+00	-4.25635E-01	0.00000E+00	-2.19731E+01	9.00000E+01
4.60000E+00	4.40178E+01	-4.40158E+01	0.00000E+00	-4.19721E-01	0.00000E+00	-2.14184E+01	9.00000E+01
4.63333E+00	4.51128E+01	-4.51109E+01	0.00000E+00	-4.08184E-01	0.00000E+00	-2.08805E+01	9.00000E+01
4.66667E+00	4.62085E+01	-4.62068E+01	0.00000E+00	-3.92301E-01	0.00000E+00	-2.03591E+01	9.00000E+01
4.70000E+00	4.73050E+01	-4.73035E+01	0.00000E+00	-3.73251E-01	0.00000E+00	-1.98540E+01	9.00000E+01
4.73333E+00	4.84022E+01	-4.84009E+01	0.00000E+00	-3.52091E-01	0.00000E+00	-1.93648E+01	9.00000E+01
4.76667E+00	4.95001E+01	-4.94990E+01	0.00000E+00	-3.29744E-01	0.00000E+00	-1.88911E+01	9.00000E+01
4.80000E+00	5.05988E+01	-5.05978E+01	0.00000E+00	-3.06996E-01	0.00000E+00	-1.84325E+01	9.00000E+01
4.83333E+00	5.16981E+01	-5.16973E+01	0.00000E+00	-2.84528E-01	0.00000E+00	-1.79885E+01	9.00000E+01
4.86667E+00	5.27981E+01	-5.27974E+01	0.00000E+00	-2.62825E-01	0.00000E+00	-1.75589E+01	9.00000E+01
4.90000E+00	5.38987E+01	-5.38982E+01	0.00000E+00	-2.42283E-01	0.00000E+00	-1.71432E+01	9.00000E+01
4.93333E+00	5.50000E+01	-5.49995E+01	0.00000E+00	-2.23195E-01	0.00000E+00	-1.67410E+01	9.00000E+01
4.96667E+00	5.61018E+01	-5.61015E+01	0.00000E+00	-2.05756E-01	0.00000E+00	-1.63519E+01	9.00000E+01
5.00000E+00	5.72043E+01	-5.72040E+01	0.00000E+00	-1.90080E-01	0.00000E+00	-1.59756E+01	9.00000E+01
5.03333E+00	5.83073E+01	-5.83070E+01	0.00000E+00	-1.76207E-01	0.00000E+00	-1.56116E+01	9.00000E+01
5.06667E+00	5.94109E+01	-5.94106E+01	0.00000E+00	-1.64124E-01	0.00000E+00	-1.52598E+01	9.00000E+01
5.10000E+00	6.05150E+01	-6.05148E+01	0.00000E+00	-1.53770E-01	0.00000E+00	-1.49196E+01	9.00000E+01
5.13333E+00	6.16196E+01	-6.16194E+01	0.00000E+00	-1.45053E-01	0.00000E+00	-1.45907E+01	9.00000E+01
5.16667E+00	6.27248E+01	-6.27246E+01	0.00000E+00	-1.37856E-01	0.00000E+00	-1.42729E+01	9.00000E+01
5.20000E+00	6.38304E+01	-6.38303E+01	0.00000E+00	-1.32045E-01	0.00000E+00	-1.39657E+01	9.00000E+01
5.23333E+00	6.49365E+01	-6.49364E+01	0.00000E+00	-1.27474E-01	0.00000E+00	-1.36689E+01	9.00000E+01
5.26667E+00	6.60432E+01	-6.60430E+01	0.00000E+00	-1.23997E-01	0.00000E+00	-1.33822E+01	9.00000E+01
5.30000E+00	6.71502E+01	-6.71501E+01	0.00000E+00	-1.21470E-01	0.00000E+00	-1.31051E+01	9.00000E+01
5.33333E+00	6.82578E+01	-6.82577E+01	0.00000E+00	-1.19751E-01	0.00000E+00	-1.28375E+01	9.00000E+01
5.36667E+00	6.93658E+01	-6.93657E+01	0.00000E+00	-1.18709E-01	0.00000E+00	-1.25790E+01	9.00000E+01
5.40000E+00	7.04742E+01	-7.04741E+01	0.00000E+00	-1.18221E-01	0.00000E+00	-1.23294E+01	9.00000E+01
5.43333E+00	7.15830E+01	-7.15829E+01	0.00000E+00	-1.18177E-01	0.00000E+00	-1.20883E+01	9.00000E+01
5.46667E+00	7.26923E+01	-7.26922E+01	0.00000E+00	-1.18480E-01	0.00000E+00	-1.18555E+01	9.00000E+01
5.50000E+00	7.38020E+01	-7.38019E+01	0.00000E+00	-1.19045E-01	0.00000E+00	-1.16308E+01	9.00000E+01
5.53333E+00	7.49121E+01	-7.49120E+01	0.00000E+00	-1.19797E-01	0.00000E+00	-1.14138E+01	9.00000E+01
5.56667E+00	7.60226E+01	-7.60225E+01	0.00000E+00	-1.20676E-01	0.00000E+00	-1.12043E+01	9.00000E+01
5.60000E+00	7.71335E+01	-7.71334E+01	0.00000E+00	-1.21633E-01	0.00000E+00	-1.10020E+01	9.00000E+01
5.63333E+00	7.82447E+01	-7.82446E+01	0.00000E+00	-1.22627E-01	0.00000E+00	-1.08068E+01	9.00000E+01
5.66667E+00	7.93564E+01	-7.93563E+01	0.00000E+00	-1.23631E-01	0.00000E+00	-1.06183E+01	9.00000E+01
5.70000E+00	8.04684E+01	-8.04683E+01	0.00000E+00	-1.24622E-01	0.00000E+00	-1.04363E+01	9.00000E+01
5.73333E+00	8.15808E+01	-8.15807E+01	0.00000E+00	-1.25588E-01	0.00000E+00	-1.02606E+01	9.00000E+01
5.76667E+00	8.26936E+01	-8.26935E+01	0.00000E+00	-1.26518E-01	0.00000E+00	-1.00910E+01	9.00000E+01
5.80000E+00	8.38067E+01	-8.38066E+01	0.00000E+00	-1.27410E-01	0.00000E+00	-9.92719E+00	9.00000E+01
5.83333E+00	8.49201E+01	-8.49201E+01	0.00000E+00	-1.28265E-01	0.00000E+00	-9.76904E+00	9.00000E+01
5.86667E+00	8.60340E+01	-8.60339E+01	0.00000E+00	-1.29086E-01	0.00000E+00	-9.61633E+00	9.00000E+01
5.90000E+00	8.71481E+01	-8.71480E+01	0.00000E+00	-1.29879E-01	0.00000E+00	-9.46884E+00	9.00000E+01
5.93333E+00	8.82626E+01	-8.82625E+01	0.00000E+00	-1.30651E-01	0.00000E+00	-9.32640E+00	9.00000E+01
5.96667E+00	8.93774E+01	-8.93773E+01	0.00000E+00	-1.31410E-01	0.00000E+00	-9.18881E+00	9.00000E+01

6.00000E+00 9.04925E+01 -9.04924E+01 0.00000E+00 -1.32165E-01 0.00000E+00 -9.05590E+00 9.00000E+01

1Boat 30 mph

Request Number 32054

Force exerted on Marker 20005 by Marker 3200

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz
0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

3.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

5.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1Boat 30 mph
Request Number 32061

Displacement of Marker 20006 relative to Marker 3200

Time	Mag	X	Y	Z	Yaw	Pitch	Roll
0.00000E+00	1.41631E+02	1.41626E+02	0.00000E+00	-1.14900E+00	0.00000E+00	0.00000E+00	9.00000E+01
3.33333E-02	1.40164E+02	1.40159E+02	0.00000E+00	-1.13924E+00	0.00000E+00	-4.79338E-02	9.00000E+01
6.66667E-02	1.38697E+02	1.38693E+02	0.00000E+00	-1.11589E+00	0.00000E+00	-1.55993E-01	9.00000E+01
1.00000E-01	1.37231E+02	1.37226E+02	0.00000E+00	-1.08465E+00	0.00000E+00	-2.92789E-01	9.00000E+01
1.33333E-01	1.35764E+02	1.35760E+02	0.00000E+00	-1.04940E+00	0.00000E+00	-4.40091E-01	9.00000E+01
1.66667E-01	1.34297E+02	1.34294E+02	0.00000E+00	-1.01264E+00	0.00000E+00	-5.88407E-01	9.00000E+01
2.00000E-01	1.32831E+02	1.32827E+02	0.00000E+00	-9.75963E-01	0.00000E+00	-7.33209E-01	9.00000E+01
2.33333E-01	1.31364E+02	1.31361E+02	0.00000E+00	-9.40861E-01	0.00000E+00	-8.71037E-01	9.00000E+01
2.66667E-01	1.29898E+02	1.29895E+02	0.00000E+00	-9.08141E-01	0.00000E+00	-1.00100E+00	9.00000E+01
3.00000E-01	1.28432E+02	1.28429E+02	0.00000E+00	-8.78215E-01	0.00000E+00	-1.12335E+00	9.00000E+01
3.33333E-01	1.26965E+02	1.26962E+02	0.00000E+00	-8.51322E-01	0.00000E+00	-1.23864E+00	9.00000E+01
3.66667E-01	1.25499E+02	1.25496E+02	0.00000E+00	-8.27453E-01	0.00000E+00	-1.34755E+00	9.00000E+01
4.00000E-01	1.24033E+02	1.24030E+02	0.00000E+00	-8.06548E-01	0.00000E+00	-1.45068E+00	9.00000E+01
4.33333E-01	1.22566E+02	1.22564E+02	0.00000E+00	-7.88460E-01	0.00000E+00	-1.54857E+00	9.00000E+01
4.66667E-01	1.21100E+02	1.21098E+02	0.00000E+00	-7.72976E-01	0.00000E+00	-1.64181E+00	9.00000E+01
5.00000E-01	1.19634E+02	1.19631E+02	0.00000E+00	-7.59851E-01	0.00000E+00	-1.73090E+00	9.00000E+01
5.33333E-01	1.18167E+02	1.18165E+02	0.00000E+00	-7.48823E-01	0.00000E+00	-1.81631E+00	9.00000E+01
5.66667E-01	1.16701E+02	1.16699E+02	0.00000E+00	-7.39570E-01	0.00000E+00	-1.89852E+00	9.00000E+01
6.00000E-01	1.15235E+02	1.15233E+02	0.00000E+00	-7.31796E-01	0.00000E+00	-1.97793E+00	9.00000E+01
6.33333E-01	1.13769E+02	1.13766E+02	0.00000E+00	-7.25224E-01	0.00000E+00	-2.05485E+00	9.00000E+01
6.66667E-01	1.12302E+02	1.12300E+02	0.00000E+00	-7.19598E-01	0.00000E+00	-2.12954E+00	9.00000E+01
7.00000E-01	1.10836E+02	1.10834E+02	0.00000E+00	-7.14679E-01	0.00000E+00	-2.20222E+00	9.00000E+01
7.33333E-01	1.09370E+02	1.09368E+02	0.00000E+00	-7.10269E-01	0.00000E+00	-2.27306E+00	9.00000E+01

7.66667E-01	1.07904E+02	1.07902E+02	0.00000E+00	-7.06193E-01	0.00000E+00	-2.34219E+00	9.00000E+01
8.00000E-01	1.06438E+02	1.06435E+02	0.00000E+00	-7.02307E-01	0.00000E+00	-2.40972E+00	9.00000E+01
8.33333E-01	1.04971E+02	1.04969E+02	0.00000E+00	-6.98494E-01	0.00000E+00	-2.47572E+00	9.00000E+01
8.66667E-01	1.03505E+02	1.03503E+02	0.00000E+00	-6.94665E-01	0.00000E+00	-2.54026E+00	9.00000E+01
9.00000E-01	1.02039E+02	1.02037E+02	0.00000E+00	-6.90754E-01	0.00000E+00	-2.60337E+00	9.00000E+01
9.33333E-01	1.00573E+02	1.00570E+02	0.00000E+00	-6.86716E-01	0.00000E+00	-2.66508E+00	9.00000E+01
9.66667E-01	9.91066E+01	9.91042E+01	0.00000E+00	-6.82530E-01	0.00000E+00	-2.72539E+00	9.00000E+01
1.00000E+00	9.76403E+01	9.76380E+01	0.00000E+00	-6.78185E-01	0.00000E+00	-2.78433E+00	9.00000E+01
1.03333E+00	9.61741E+01	9.61718E+01	0.00000E+00	-6.73835E-01	0.00000E+00	-2.84191E+00	9.00000E+01
1.06667E+00	9.47079E+01	9.47055E+01	0.00000E+00	-6.69752E-01	0.00000E+00	-2.89813E+00	9.00000E+01
1.10000E+00	9.32417E+01	9.32393E+01	0.00000E+00	-6.66115E-01	0.00000E+00	-2.95303E+00	9.00000E+01
1.13333E+00	9.17755E+01	9.17731E+01	0.00000E+00	-6.62905E-01	0.00000E+00	-3.00668E+00	9.00000E+01
1.16667E+00	9.03092E+01	9.03068E+01	0.00000E+00	-6.59998E-01	0.00000E+00	-3.05912E+00	9.00000E+01
1.20000E+00	8.88430E+01	8.88406E+01	0.00000E+00	-6.57254E-01	0.00000E+00	-3.11043E+00	9.00000E+01
1.23333E+00	8.73768E+01	8.73743E+01	0.00000E+00	-6.54542E-01	0.00000E+00	-3.16066E+00	9.00000E+01
1.26667E+00	8.59106E+01	8.59081E+01	0.00000E+00	-6.51750E-01	0.00000E+00	-3.20984E+00	9.00000E+01
1.30000E+00	8.44443E+01	8.44418E+01	0.00000E+00	-6.48781E-01	0.00000E+00	-3.25799E+00	9.00000E+01
1.33333E+00	8.29781E+01	8.29756E+01	0.00000E+00	-6.45553E-01	0.00000E+00	-3.30512E+00	9.00000E+01
1.36667E+00	8.15119E+01	8.15093E+01	0.00000E+00	-6.41998E-01	0.00000E+00	-3.35123E+00	9.00000E+01
1.40000E+00	8.00456E+01	8.00431E+01	0.00000E+00	-6.38068E-01	0.00000E+00	-3.39629E+00	9.00000E+01
1.43333E+00	7.85793E+01	7.85768E+01	0.00000E+00	-6.33733E-01	0.00000E+00	-3.44030E+00	9.00000E+01
1.46667E+00	7.71131E+01	7.71105E+01	0.00000E+00	-6.28986E-01	0.00000E+00	-3.48321E+00	9.00000E+01
1.50000E+00	7.56468E+01	7.56442E+01	0.00000E+00	-6.23837E-01	0.00000E+00	-3.52500E+00	9.00000E+01
1.53333E+00	7.41805E+01	7.41780E+01	0.00000E+00	-6.18317E-01	0.00000E+00	-3.56565E+00	9.00000E+01
1.56667E+00	7.27142E+01	7.27117E+01	0.00000E+00	-6.12474E-01	0.00000E+00	-3.60512E+00	9.00000E+01
1.60000E+00	7.12479E+01	7.12454E+01	0.00000E+00	-6.06372E-01	0.00000E+00	-3.64340E+00	9.00000E+01
1.63333E+00	6.97816E+01	6.97791E+01	0.00000E+00	-6.00089E-01	0.00000E+00	-3.68047E+00	9.00000E+01
1.66667E+00	6.83153E+01	6.83127E+01	0.00000E+00	-5.93713E-01	0.00000E+00	-3.71633E+00	9.00000E+01
1.70000E+00	6.68490E+01	6.68464E+01	0.00000E+00	-5.87338E-01	0.00000E+00	-3.75098E+00	9.00000E+01
1.73333E+00	6.53827E+01	6.53801E+01	0.00000E+00	-5.81060E-01	0.00000E+00	-3.78444E+00	9.00000E+01
1.76667E+00	6.39163E+01	6.39137E+01	0.00000E+00	-5.74976E-01	0.00000E+00	-3.81673E+00	9.00000E+01
1.80000E+00	6.24500E+01	6.24474E+01	0.00000E+00	-5.69178E-01	0.00000E+00	-3.84788E+00	9.00000E+01
1.83333E+00	6.09836E+01	6.09810E+01	0.00000E+00	-5.63749E-01	0.00000E+00	-3.87795E+00	9.00000E+01
1.86667E+00	5.95173E+01	5.95146E+01	0.00000E+00	-5.58763E-01	0.00000E+00	-3.90697E+00	9.00000E+01
1.90000E+00	5.80509E+01	5.80483E+01	0.00000E+00	-5.54278E-01	0.00000E+00	-3.93503E+00	9.00000E+01
1.93333E+00	5.65845E+01	5.65819E+01	0.00000E+00	-5.50338E-01	0.00000E+00	-3.96217E+00	9.00000E+01
1.96667E+00	5.51182E+01	5.51155E+01	0.00000E+00	-5.46969E-01	0.00000E+00	-3.98847E+00	9.00000E+01
2.00000E+00	5.36518E+01	5.36491E+01	0.00000E+00	-5.44182E-01	0.00000E+00	-4.01399E+00	9.00000E+01
2.03333E+00	5.21855E+01	5.21827E+01	0.00000E+00	-5.41972E-01	0.00000E+00	-4.03876E+00	9.00000E+01
2.06667E+00	5.07191E+01	5.07163E+01	0.00000E+00	-5.40316E-01	0.00000E+00	-4.06286E+00	9.00000E+01
2.10000E+00	4.92528E+01	4.92498E+01	0.00000E+00	-5.39168E-01	0.00000E+00	-4.08635E+00	9.00000E+01
2.13333E+00	4.77865E+01	4.77834E+01	0.00000E+00	-5.38467E-01	0.00000E+00	-4.10931E+00	9.00000E+01
2.16667E+00	4.63201E+01	4.63170E+01	0.00000E+00	-5.38136E-01	0.00000E+00	-4.13180E+00	9.00000E+01
2.20000E+00	4.48538E+01	4.48506E+01	0.00000E+00	-5.38091E-01	0.00000E+00	-4.15388E+00	9.00000E+01
2.23333E+00	4.33875E+01	4.33841E+01	0.00000E+00	-5.38236E-01	0.00000E+00	-4.17560E+00	9.00000E+01
2.26667E+00	4.19212E+01	4.19177E+01	0.00000E+00	-5.38472E-01	0.00000E+00	-4.19700E+00	9.00000E+01
2.30000E+00	4.04548E+01	4.04513E+01	0.00000E+00	-5.38702E-01	0.00000E+00	-4.21811E+00	9.00000E+01
2.33333E+00	3.89885E+01	3.89848E+01	0.00000E+00	-5.38830E-01	0.00000E+00	-4.23894E+00	9.00000E+01
2.36667E+00	3.75223E+01	3.75184E+01	0.00000E+00	-5.38768E-01	0.00000E+00	-4.25949E+00	9.00000E+01
2.40000E+00	3.60560E+01	3.60519E+01	0.00000E+00	-5.38433E-01	0.00000E+00	-4.27976E+00	9.00000E+01
2.43333E+00	3.45897E+01	3.45855E+01	0.00000E+00	-5.37763E-01	0.00000E+00	-4.29972E+00	9.00000E+01
2.46667E+00	3.31234E+01	3.31190E+01	0.00000E+00	-5.36705E-01	0.00000E+00	-4.31935E+00	9.00000E+01
2.50000E+00	3.16571E+01	3.16526E+01	0.00000E+00	-5.35228E-01	0.00000E+00	-4.33862E+00	9.00000E+01
2.53333E+00	3.01909E+01	3.01861E+01	0.00000E+00	-5.33315E-01	0.00000E+00	-4.35748E+00	9.00000E+01

2.56667E+00	2.87246E+01	2.87197E+01	0.00000E+00	-5.30970E-01	0.00000E+00	-4.37589E+00	9.00000E+01
2.60000E+00	2.72583E+01	2.72532E+01	0.00000E+00	-5.28225E-01	0.00000E+00	-4.39380E+00	9.00000E+01
2.63333E+00	2.57921E+01	2.57868E+01	0.00000E+00	-5.25103E-01	0.00000E+00	-4.41118E+00	9.00000E+01
2.66667E+00	2.43259E+01	2.43203E+01	0.00000E+00	-5.21663E-01	0.00000E+00	-4.42798E+00	9.00000E+01
2.70000E+00	2.28597E+01	2.28538E+01	0.00000E+00	-5.17973E-01	0.00000E+00	-4.44419E+00	9.00000E+01
2.73333E+00	2.13935E+01	2.13873E+01	0.00000E+00	-5.14112E-01	0.00000E+00	-4.45975E+00	9.00000E+01
2.76667E+00	1.99273E+01	1.99208E+01	0.00000E+00	-5.10167E-01	0.00000E+00	-4.47468E+00	9.00000E+01
2.80000E+00	1.84613E+01	1.84543E+01	0.00000E+00	-5.06226E-01	0.00000E+00	-4.48894E+00	9.00000E+01
2.83333E+00	1.69952E+01	1.69878E+01	0.00000E+00	-5.02379E-01	0.00000E+00	-4.50255E+00	9.00000E+01
2.86667E+00	1.55293E+01	1.55213E+01	0.00000E+00	-4.98716E-01	0.00000E+00	-4.51553E+00	9.00000E+01
2.90000E+00	1.40635E+01	1.40548E+01	0.00000E+00	-4.95318E-01	0.00000E+00	-4.52788E+00	9.00000E+01
2.93333E+00	1.25979E+01	1.25882E+01	0.00000E+00	-4.92261E-01	0.00000E+00	-4.53965E+00	9.00000E+01
2.96667E+00	1.11325E+01	1.11217E+01	0.00000E+00	-4.89606E-01	0.00000E+00	-4.55087E+00	9.00000E+01
3.00000E+00	9.66745E+00	9.65516E+00	0.00000E+00	-4.87400E-01	0.00000E+00	-4.56159E+00	9.00000E+01
3.03333E+00	8.20300E+00	8.18861E+00	0.00000E+00	-4.85674E-01	0.00000E+00	-4.57187E+00	9.00000E+01
3.06667E+00	6.73950E+00	6.72206E+00	0.00000E+00	-4.84444E-01	0.00000E+00	-4.58176E+00	9.00000E+01
3.10000E+00	5.27772E+00	5.25551E+00	0.00000E+00	-4.83706E-01	0.00000E+00	-4.59133E+00	9.00000E+01
3.13333E+00	3.82093E+00	3.79047E+00	0.00000E+00	-4.81503E-01	0.00000E+00	-4.60579E+00	9.00000E+01
3.16667E+00	2.39997E+00	2.35952E+00	0.00000E+00	-4.38801E-01	0.00000E+00	-4.71147E+00	9.00000E+01
3.20000E+00	1.01987E+00	9.33406E-01	0.00000E+00	-4.10949E-01	0.00000E+00	-4.74291E+00	9.00000E+01
3.23333E+00	6.43348E-01	-4.97856E-01	0.00000E+00	-4.07475E-01	0.00000E+00	-4.70954E+00	9.00000E+01
3.26667E+00	1.96605E+00	-1.92339E+00	0.00000E+00	-4.07318E-01	0.00000E+00	-4.68547E+00	9.00000E+01
3.30000E+00	3.36375E+00	-3.33910E+00	0.00000E+00	-4.06431E-01	0.00000E+00	-4.70092E+00	9.00000E+01
3.33333E+00	4.64646E+00	-4.63487E+00	0.00000E+00	-3.27978E-01	0.00000E+00	-6.03910E+00	9.00000E+01
3.36667E+00	5.62917E+00	-5.62917E+00	0.00000E+00	-3.37369E-04	0.00000E+00	-1.12162E+01	9.00000E+01
3.40000E+00	6.42969E+00	-6.40984E+00	0.00000E+00	5.04812E-01	0.00000E+00	-1.89897E+01	9.00000E+01
3.43333E+00	7.22360E+00	-7.16325E+00	0.00000E+00	9.31741E-01	0.00000E+00	-2.56629E+01	9.00000E+01
3.46667E+00	8.05489E+00	-7.95958E+00	0.00000E+00	1.23540E+00	0.00000E+00	-3.04751E+01	9.00000E+01
3.50000E+00	8.91854E+00	-8.79935E+00	0.00000E+00	1.45320E+00	0.00000E+00	-3.39278E+01	9.00000E+01
3.53333E+00	9.81085E+00	-9.67791E+00	0.00000E+00	1.60965E+00	0.00000E+00	-3.63619E+01	9.00000E+01
3.56667E+00	1.07334E+01	-1.05934E+01	0.00000E+00	1.72801E+00	0.00000E+00	-3.78797E+01	9.00000E+01
3.60000E+00	1.16886E+01	-1.15443E+01	0.00000E+00	1.83076E+00	0.00000E+00	-3.85228E+01	9.00000E+01
3.63333E+00	1.26774E+01	-1.25295E+01	0.00000E+00	1.93097E+00	0.00000E+00	-3.83880E+01	9.00000E+01
3.66667E+00	1.36856E+01	-1.35370E+01	0.00000E+00	2.01152E+00	0.00000E+00	-3.78771E+01	9.00000E+01
3.70000E+00	1.46962E+01	-1.45520E+01	0.00000E+00	2.05365E+00	0.00000E+00	-3.72916E+01	9.00000E+01
3.73333E+00	1.57060E+01	-1.55710E+01	0.00000E+00	2.05492E+00	0.00000E+00	-3.66581E+01	9.00000E+01
3.76667E+00	1.67158E+01	-1.65934E+01	0.00000E+00	2.01860E+00	0.00000E+00	-3.59659E+01	9.00000E+01
3.80000E+00	1.77255E+01	-1.76181E+01	0.00000E+00	1.94809E+00	0.00000E+00	-3.52284E+01	9.00000E+01
3.83333E+00	1.87339E+01	-1.86427E+01	0.00000E+00	1.84622E+00	0.00000E+00	-3.44785E+01	9.00000E+01
3.86667E+00	1.97357E+01	-1.96609E+01	0.00000E+00	1.71684E+00	0.00000E+00	-3.38717E+01	9.00000E+01
3.90000E+00	2.07414E+01	-2.06820E+01	0.00000E+00	1.56838E+00	0.00000E+00	-3.34803E+01	9.00000E+01
3.93333E+00	2.17578E+01	-2.17124E+01	0.00000E+00	1.40381E+00	0.00000E+00	-3.31383E+01	9.00000E+01
3.96667E+00	2.27836E+01	-2.27510E+01	0.00000E+00	1.21866E+00	0.00000E+00	-3.27476E+01	9.00000E+01
4.00000E+00	2.38176E+01	-2.37962E+01	0.00000E+00	1.00914E+00	0.00000E+00	-3.23045E+01	9.00000E+01
4.03333E+00	2.48602E+01	-2.48476E+01	0.00000E+00	7.92679E-01	0.00000E+00	-3.18137E+01	9.00000E+01
4.06667E+00	2.59111E+01	-2.59044E+01	0.00000E+00	5.88646E-01	0.00000E+00	-3.12828E+01	9.00000E+01
4.10000E+00	2.69691E+01	-2.69661E+01	0.00000E+00	4.00666E-01	0.00000E+00	-3.07180E+01	9.00000E+01
4.13333E+00	2.80329E+01	-2.80320E+01	0.00000E+00	2.28589E-01	0.00000E+00	-3.01251E+01	9.00000E+01
4.16667E+00	2.91018E+01	-2.91017E+01	0.00000E+00	7.19025E-02	0.00000E+00	-2.95104E+01	9.00000E+01
4.20000E+00	3.01748E+01	-3.01747E+01	0.00000E+00	-6.96003E-02	0.00000E+00	-2.88785E+01	9.00000E+01
4.23333E+00	3.12514E+01	-3.12508E+01	0.00000E+00	-1.96040E-01	0.00000E+00	-2.82344E+01	9.00000E+01
4.26667E+00	3.23310E+01	-3.23295E+01	0.00000E+00	-3.07494E-01	0.00000E+00	-2.75827E+01	9.00000E+01
4.30000E+00	3.34130E+01	-3.34106E+01	0.00000E+00	-4.04070E-01	0.00000E+00	-2.69281E+01	9.00000E+01
4.33333E+00	3.44972E+01	-3.44938E+01	0.00000E+00	-4.85972E-01	0.00000E+00	-2.62745E+01	9.00000E+01

4.36667E+00	3.55831E+01	-3.55788E+01	0.00000E+00	-5.53564E-01	0.00000E+00	-2.56258E+01	9.00000E+01
4.40000E+00	3.66706E+01	-3.66656E+01	0.00000E+00	-6.07234E-01	0.00000E+00	-2.49842E+01	9.00000E+01
4.43333E+00	3.77594E+01	-3.77538E+01	0.00000E+00	-6.47759E-01	0.00000E+00	-2.43532E+01	9.00000E+01
4.46667E+00	3.88493E+01	-3.88434E+01	0.00000E+00	-6.76148E-01	0.00000E+00	-2.37353E+01	9.00000E+01
4.50000E+00	3.99402E+01	-3.99341E+01	0.00000E+00	-6.93585E-01	0.00000E+00	-2.31320E+01	9.00000E+01
4.53333E+00	4.10319E+01	-4.10259E+01	0.00000E+00	-7.01371E-01	0.00000E+00	-2.25444E+01	9.00000E+01
4.56667E+00	4.21246E+01	-4.21187E+01	0.00000E+00	-7.00870E-01	0.00000E+00	-2.19731E+01	9.00000E+01
4.60000E+00	4.32180E+01	-4.32125E+01	0.00000E+00	-6.93449E-01	0.00000E+00	-2.14184E+01	9.00000E+01
4.63333E+00	4.43123E+01	-4.43071E+01	0.00000E+00	-6.80444E-01	0.00000E+00	-2.08805E+01	9.00000E+01
4.66667E+00	4.54073E+01	-4.54025E+01	0.00000E+00	-6.63127E-01	0.00000E+00	-2.03591E+01	9.00000E+01
4.70000E+00	4.65031E+01	-4.64987E+01	0.00000E+00	-6.42673E-01	0.00000E+00	-1.98540E+01	9.00000E+01
4.73333E+00	4.75997E+01	-4.75956E+01	0.00000E+00	-6.20136E-01	0.00000E+00	-1.93648E+01	9.00000E+01
4.76667E+00	4.86970E+01	-4.86933E+01	0.00000E+00	-5.96436E-01	0.00000E+00	-1.88911E+01	9.00000E+01
4.80000E+00	4.97950E+01	-4.97917E+01	0.00000E+00	-5.72355E-01	0.00000E+00	-1.84325E+01	9.00000E+01
4.83333E+00	5.08937E+01	-5.08907E+01	0.00000E+00	-5.48574E-01	0.00000E+00	-1.79885E+01	9.00000E+01
4.86667E+00	5.19931E+01	-5.19904E+01	0.00000E+00	-5.25575E-01	0.00000E+00	-1.75589E+01	9.00000E+01
4.90000E+00	5.30931E+01	-5.30907E+01	0.00000E+00	-5.03754E-01	0.00000E+00	-1.71432E+01	9.00000E+01
4.93333E+00	5.41938E+01	-5.41917E+01	0.00000E+00	-4.83402E-01	0.00000E+00	-1.67410E+01	9.00000E+01
4.96667E+00	5.52952E+01	-5.52932E+01	0.00000E+00	-4.64716E-01	0.00000E+00	-1.63519E+01	9.00000E+01
5.00000E+00	5.63971E+01	-5.63953E+01	0.00000E+00	-4.47807E-01	0.00000E+00	-1.59756E+01	9.00000E+01
5.03333E+00	5.74996E+01	-5.74980E+01	0.00000E+00	-4.32718E-01	0.00000E+00	-1.56116E+01	9.00000E+01
5.06667E+00	5.86028E+01	-5.86013E+01	0.00000E+00	-4.19434E-01	0.00000E+00	-1.52598E+01	9.00000E+01
5.10000E+00	5.97064E+01	-5.97050E+01	0.00000E+00	-4.07896E-01	0.00000E+00	-1.49196E+01	9.00000E+01
5.13333E+00	6.08106E+01	-6.08093E+01	0.00000E+00	-3.98012E-01	0.00000E+00	-1.45907E+01	9.00000E+01
5.16667E+00	6.19154E+01	-6.19141E+01	0.00000E+00	-3.89665E-01	0.00000E+00	-1.42729E+01	9.00000E+01
5.20000E+00	6.30206E+01	-6.30194E+01	0.00000E+00	-3.82721E-01	0.00000E+00	-1.39657E+01	9.00000E+01
5.23333E+00	6.41263E+01	-6.41252E+01	0.00000E+00	-3.77036E-01	0.00000E+00	-1.36689E+01	9.00000E+01
5.26667E+00	6.52326E+01	-6.52315E+01	0.00000E+00	-3.72464E-01	0.00000E+00	-1.33822E+01	9.00000E+01
5.30000E+00	6.63393E+01	-6.63383E+01	0.00000E+00	-3.68860E-01	0.00000E+00	-1.31051E+01	9.00000E+01
5.33333E+00	6.74465E+01	-6.74455E+01	0.00000E+00	-3.66084E-01	0.00000E+00	-1.28375E+01	9.00000E+01
5.36667E+00	6.85541E+01	-6.85532E+01	0.00000E+00	-3.64005E-01	0.00000E+00	-1.25790E+01	9.00000E+01
5.40000E+00	6.96622E+01	-6.96613E+01	0.00000E+00	-3.62499E-01	0.00000E+00	-1.23294E+01	9.00000E+01
5.43333E+00	7.07708E+01	-7.07698E+01	0.00000E+00	-3.61459E-01	0.00000E+00	-1.20883E+01	9.00000E+01
5.46667E+00	7.18797E+01	-7.18788E+01	0.00000E+00	-3.60785E-01	0.00000E+00	-1.18555E+01	9.00000E+01
5.50000E+00	7.29891E+01	-7.29882E+01	0.00000E+00	-3.60392E-01	0.00000E+00	-1.16308E+01	9.00000E+01
5.53333E+00	7.40989E+01	-7.40980E+01	0.00000E+00	-3.60208E-01	0.00000E+00	-1.14138E+01	9.00000E+01
5.56667E+00	7.52091E+01	-7.52083E+01	0.00000E+00	-3.60172E-01	0.00000E+00	-1.12043E+01	9.00000E+01
5.60000E+00	7.63197E+01	-7.63189E+01	0.00000E+00	-3.60232E-01	0.00000E+00	-1.10020E+01	9.00000E+01
5.63333E+00	7.74307E+01	-7.74299E+01	0.00000E+00	-3.60351E-01	0.00000E+00	-1.08068E+01	9.00000E+01
5.66667E+00	7.85421E+01	-7.85413E+01	0.00000E+00	-3.60498E-01	0.00000E+00	-1.06183E+01	9.00000E+01
5.70000E+00	7.96539E+01	-7.96531E+01	0.00000E+00	-3.60653E-01	0.00000E+00	-1.04363E+01	9.00000E+01
5.73333E+00	8.07661E+01	-8.07653E+01	0.00000E+00	-3.60800E-01	0.00000E+00	-1.02606E+01	9.00000E+01
5.76667E+00	8.18786E+01	-8.18778E+01	0.00000E+00	-3.60932E-01	0.00000E+00	-1.00910E+01	9.00000E+01
5.80000E+00	8.29915E+01	-8.29907E+01	0.00000E+00	-3.61043E-01	0.00000E+00	-9.92719E+00	9.00000E+01
5.83333E+00	8.41047E+01	-8.41039E+01	0.00000E+00	-3.61135E-01	0.00000E+00	-9.76904E+00	9.00000E+01
5.86667E+00	8.52183E+01	-8.52175E+01	0.00000E+00	-3.61211E-01	0.00000E+00	-9.61633E+00	9.00000E+01
5.90000E+00	8.63322E+01	-8.63315E+01	0.00000E+00	-3.61276E-01	0.00000E+00	-9.46884E+00	9.00000E+01
5.93333E+00	8.74465E+01	-8.74457E+01	0.00000E+00	-3.61338E-01	0.00000E+00	-9.32640E+00	9.00000E+01
5.96667E+00	8.85611E+01	-8.85604E+01	0.00000E+00	-3.61402E-01	0.00000E+00	-9.18881E+00	9.00000E+01
6.00000E+00	8.96760E+01	-8.96753E+01	0.00000E+00	-3.61479E-01	0.00000E+00	-9.05590E+00	9.00000E+01

1Boat 30 mph
Request Number 32064

Force exerted on Marker 20006 by Marker 3200

Time	Fm	Fx	Fy	Fz	Tqm	Tqx	Tqy	Tqz

0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-02	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
7.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
8.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.00000E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.33333E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
9.66667E-01	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

1.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
1.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
2.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

3.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
3.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
4.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.03333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.06667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.10000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.13333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.16667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.20000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.23333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.26667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.30000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.33333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

5.36667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.40000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.43333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.46667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.50000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.53333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.56667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.60000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.63333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.66667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.70000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.73333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.76667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.80000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.83333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.86667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.90000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.93333E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
5.96667E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
6.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00

APPENDIX F

Boat Performance Calculations and Data

Nomenclature

C_f = friction-drag coefficient = $D_f \cos \beta / \frac{\rho}{2} V_1^2 \lambda b^2$

C_{L_0} = lift coefficient, zero deadrise, = $\Delta / \frac{\rho}{2} V^2 b^2$

C_{L_β} = lift coefficient, deadrise surface, = $\Delta / \frac{\rho}{2} V^2 b^2$

C_{L_d} = dynamic component of lift coefficient

C_{L_b} = buoyant component of lift coefficient

C_p = distance of center of pressure (hydrodynamic force) measured along keel forward of transom = $l_p / \lambda b$

C_v = speed coefficient = $V/(gb)^{1/2}$

R_n = Reynolds number, = $V_1 \lambda b / \nu$

λ = mean wetted length-beam ratio = $\frac{(L_k + L_c)}{2b}$

λ_1 = mean wetted length-beam ratio based on area below undisturbed water surface

where

b = beam of planing surface, ft

D_f = frictional drag-force component along bottom surface, lb, = $D \cos \tau - \Delta \sin \tau$

g = acceleration due to gravity, = 32.2 ft/sec^2

L_c = wetted chine length, ft

L_k = wetted keel length, ft

l_p = distance from transom to point of intersection of hydrodynamic-force vector with keel (measured along keel), ft

V = horizontal velocity of planing surface, fps

V_1 = mean velocity over bottom of planing surface, $f(\tau, \lambda)$, fps

β = angle of deadrise of planing surface, deg

Δ = load on water, lb

ν = kinematic viscosity of fluid, ft^2/sec

ρ = mass density of water, w/g

L_h = hydrostatic lift component, lb

also

D = total horizontal hydrodynamic drag component, lb

D_p = resistance component due to pressure force, lb

d = vertical depth of trailing edge of boat (at keel) below level water surface, ft

N = component of resistance force normal to bottom, lb

a = distance between D_f and CG (measured normal to D_f), ft

f = distance between T and CG (measured normal to T), ft

T = propeller thrust, lb

ϵ = inclination of thrust line relative to keel line, deg

c = distance between N and CG (measured normal to N), ft

L_1 = difference between wetted keel and chine lengths, ft = $(L_k - L_c)$

L_2 = difference between keel and chine lengths wetted by level water surface, ft

L_m = mean wetted length, ft = $(L_k + L_c)/2$

w = specific weight of water, pcf

γ = angle between spray root line and keel line measured in plane parallel to keel, deg

τ = trim angle of planing area, deg

LCG = longitudinal distance of center of gravity from transom (measured along keel), ft

Φ = angle between the keel and spray edge measured in plane of bottom, deg

A_s = total wetted spray area, sq ft

VCG = distance of center of gravity above keel line, measured normal to keel, ft

	A	B	C	D	E	F
1	Planing Boat Speed Estimator					
2						
3	required input data:			calculated values:		
4						
5	weight of boat (lbs):		4732.3		d (ft):	0.500
6	deadrise angle (deg):		9.658		lambda:	1.673
7	planing angle (deg):		5		Re:	3.9398E+07
8		horsepower:	90		Cf:	2.3955E-03
9	planing beam (ft):		5.876		Df:	328.421
10	estimated speed (mph):		33.5		D (lbs):	743.668
11					EHP:	45.296
12					OPC:	0.503
13						
14					C(L0):	

9 JULY 1991 JK

TO FIND VALUES

① TRIM ANGLE VS SPEED - SEE GRAPH τ VS V

② ROLL STIFFNESS AT ZERO SPEED - SEE RIGHTING ARM CURVE. RECOMMEND USING VCG = 2' (CASE 3)

③ FOR BASIC HULL PROPERTIES SEE HYDROSTATICS TABLES AT CORRECT TRIM ANGLE FOR CORRESPONDING SPEED.

④ FOR RISE IN CG CALCULATE $\Delta_{DYNAMIC}$ AND INTERPOLATE FROM HYDRO AT CORRECT TRIM.

see next page for correction

FIND: $C_V = V/(gb)^{\frac{1}{2}}$

$$C_{L_0} = \tau^{1.1}\left(0.0120\lambda^{\frac{1}{2}} + 0.0055\lambda^{\frac{5}{2}}/C_V^2\right)$$

$$C_{L_\beta} = C_{L_0} - 0.0065\beta C_{L_0}^{0.60}$$

$$\Delta_D = \frac{1}{2}\rho V^2 b^2 C_{L_\beta}$$

⑤ TO FIND CENTER OF PRESSURE FORWARD OF TRANSOM USE

FIND: $C_p = \left[0.75 - 1/(5.21 C_V^2/\lambda^2 + 2.39)\right]$

CENTER = $C_p b \lambda$

λ WILL CHANGE WITH TRIM CHANGE AT COLLISION DUE TO CHANGING WATERLINE LENGTH. THE CENTER CALCULATED AT THE STEADY STATE CONDITION PRIOR TO THE COLLISION CAN BE USED AS THE LCG FOR PURPOSES OF ESTIMATING PITCH TRIM MOMENTS.

This sheet corrects a formula on page 2

29 Aug 91

THERE WAS AN ERROR IN THE FORMULA FOR DYNAMIC SUPPORTED WEIGHT, Δ_D, GIVEN IN THE 9 JULY SHEET. THE TERM C_{L_0} WAS INADVERTENTLY LEFT OUT.

THE FORMULA FOR Δ_D SHOULD READ:

$$\Delta_D = \tfrac{1}{2}\rho V^2 b^2 C_{L_0} C_{L_\beta}$$

WHICH FOR OUR BOAT IS:

$b = 5.876'$ $\quad b^2 = 34.527$

$\tau = 5°$

$V = 33.5$ mph $= 49.13$ ft/s

$\rho = 1.9384$ $\quad \tfrac{1}{2}\rho = 0.969$

$\beta = 9.658°$

$C_{L_0} = 0.10$

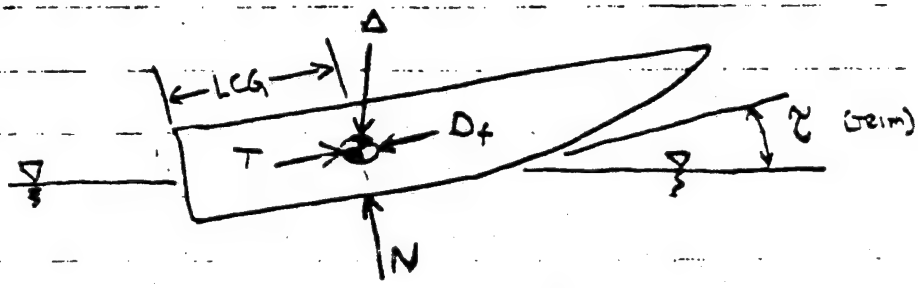
$C_{L_\beta} = C_{L_0} - 0.0065\beta C_{L_0}^{0.60} = 0.084$

$\Delta_D = \tfrac{1}{2}\rho V^2 b^2 C_{L_0} C_{L_\beta} = (0.969)(49.13)^2(5.876)^2(0.10)(0.084)$

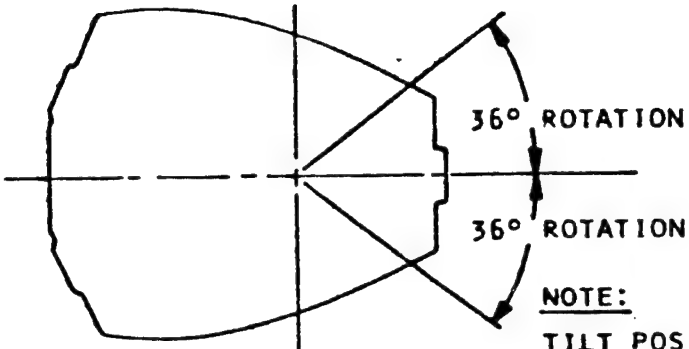
$= 678.36$ lb

9 JULY 1991

(6) NOTE THAT ALL FORCES ACT THROUGH THE CENTER OF GRAVITY



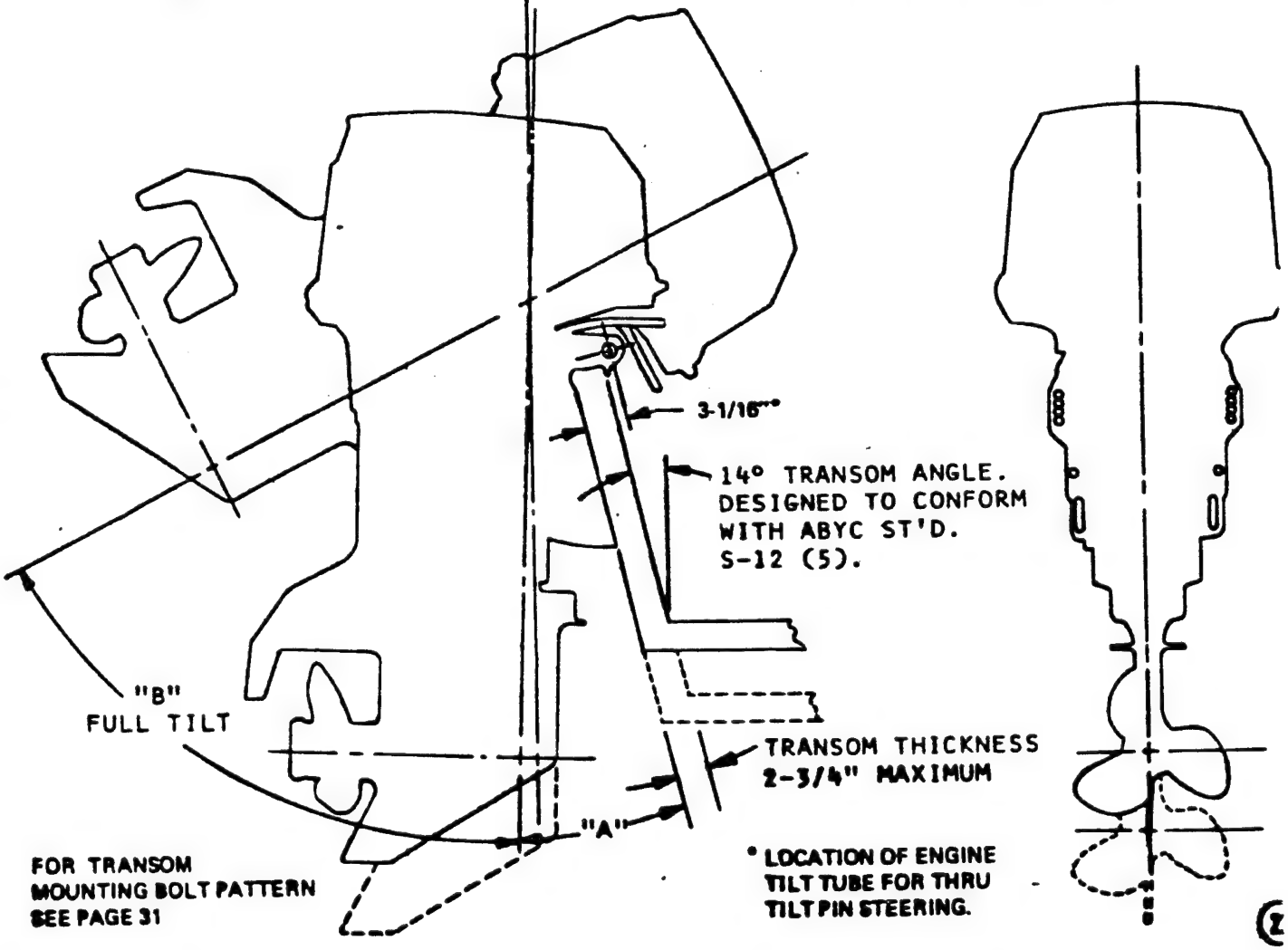
IN THIS CASE $LCG = C_p b \lambda$ AT EQUILIBRIUM



NOTE:

TILT POSITION IN FIGURE IS BASED ON A 14° TRANSOM AND SECOND TILT ANGLE ADJUSTING ROD POSITION. CHART SHOWS TILT ANGLE ADJUSTING ROD POSITION FOR A NEAR VERTICAL MOTOR CENTERLINE WITH TRANSOM ANGLE "A" AND FULL TILT MOTOR ANGLE "B" FROM EACH ANGLE ADJUSTING ROD POSITION.

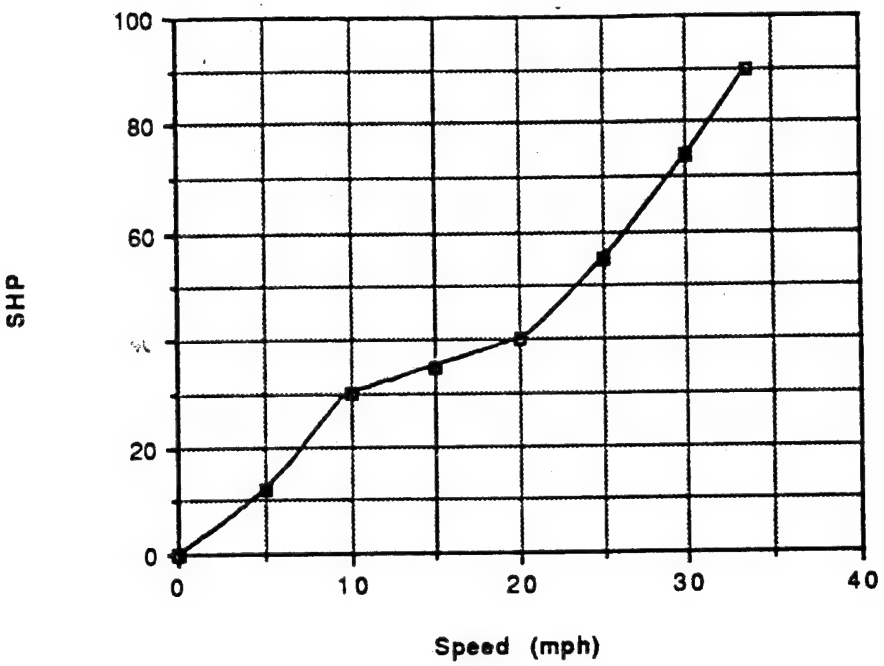
ANGLE ADJUSTING ROD POSITION	"A"	"B"
1ST	12°	65°
2ND	16°	61°
3RD	20°	57°
4TH	24°	53°
5TH	27°	50°



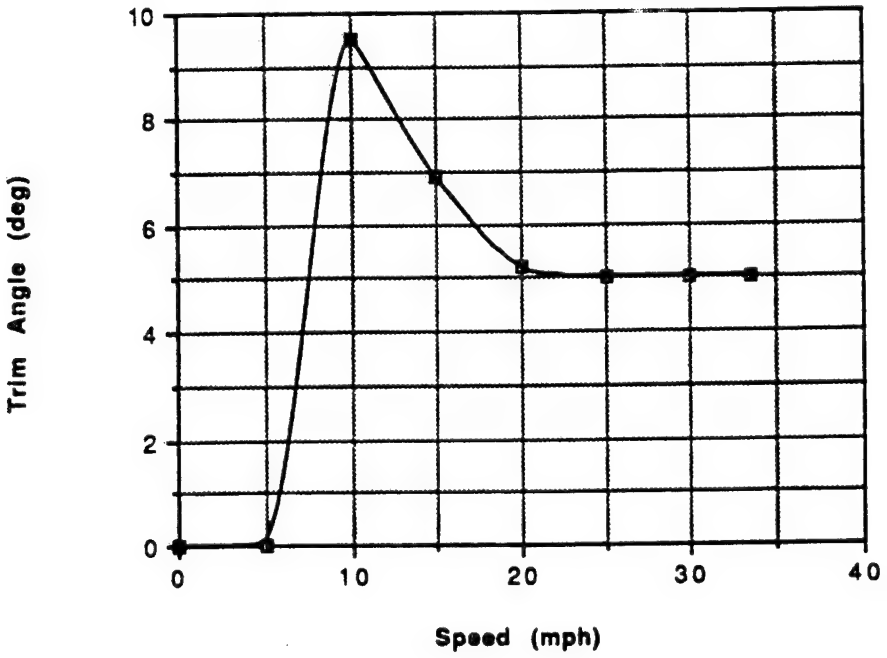
FOR TRANSOM MOUNTING BOLT PATTERN SEE PAGE 31

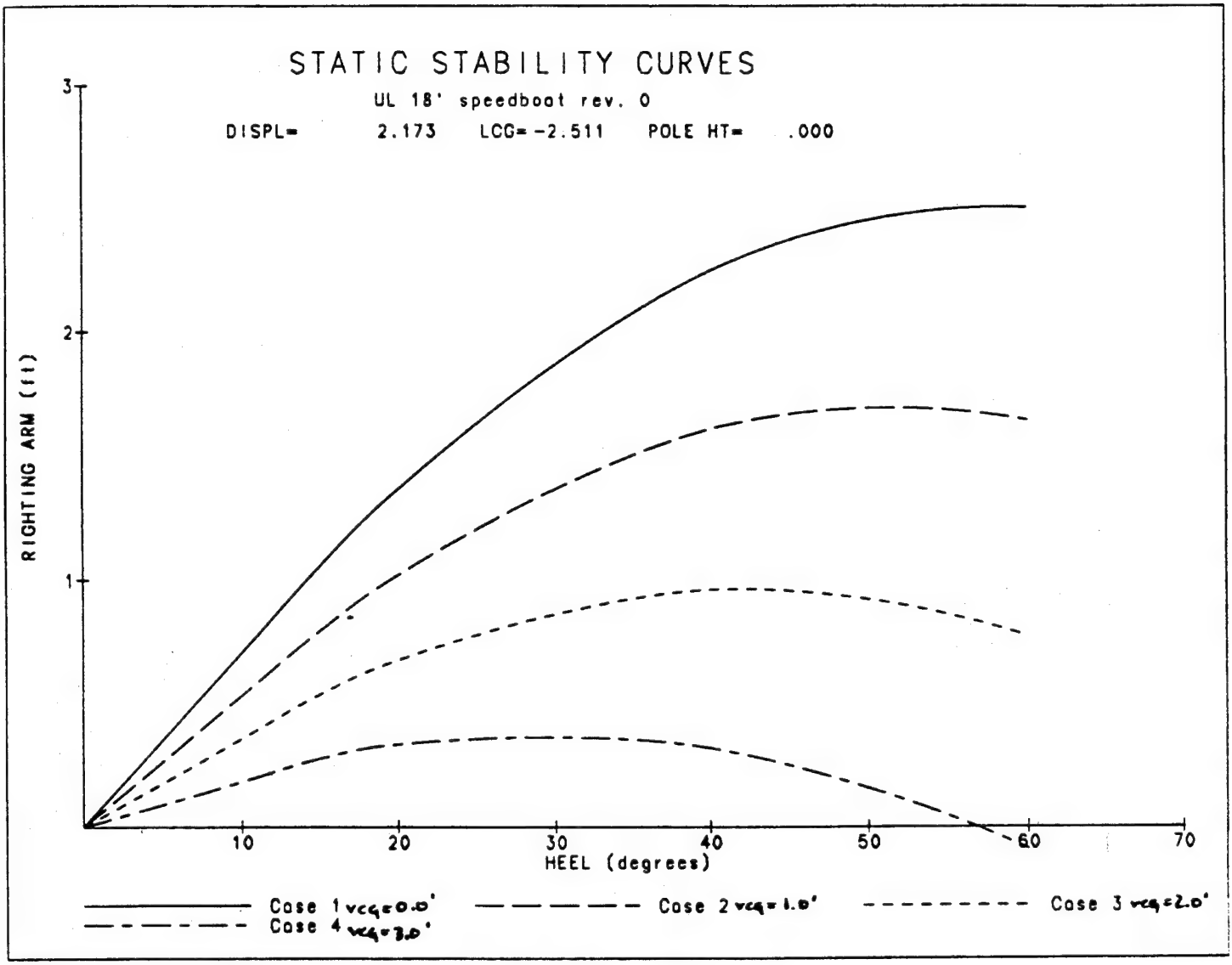
* LOCATION OF ENGINE TILT TUBE FOR THRU TILT PIN STEERING.

SHP vs Speed estimate for 18' UL speedboat



Trim Angle vs Speed estimate for UL 18' speedboat




STATIC STABILITY CURVES
UL 18' speedboat rev. 0
DISPL= 2.173 LCG= -2.511 POLE HT= .000
RIGHTING ARM (ft)
3
2
1
10
20
30
40
50
60
70
HEEL (degrees)
Case 1 vcg=0.0'
Case 2 vcg=1.0'
Case 3 vcg=2.0'
Case 4 vcg=3.0'

THE UNIVERSITY OF MICHIGAN
DEPARTMENT OF NAVAL ARCHITECTURE AND MARINE ENGINEERING
INTACT STABILITY PROGRAM - INTAC-1.1
ADAPTED FROM THE SHIP HULL CHARACTERISTICS PROGRAM - SHCP

SHIP IDENTIFIER- 18' speed boat rev. 0 SHIP NO.- 91

COND/RUN IDENTIFIER- UL 18' speedboat rev.- 0 DATE- 07/05/91

DESIGN DISPLACEMENT	2.173	TONS SW
DESIGN LCG	-2.511	FEET FROM AMIDSHIPS (+ FWD)
DESIGN DRAFT	1.250	FEET
DESIGN TRIM	.000	FEET (+ BY STERN)
LENGTH OVERALL	18.000	FEET
LENGTH BETWEEN PERPENDICULARS	18.000	FEET
LENGTH ON DESIGN WATERLINE	16.022	FEET
STATION OF MAX AREA - AT DWL	11.000	FEET FROM FP
BEAM AT STATION OF MAX AREA	6.187	FEET
SECTION AREA COEFFICIENT	.7755	
PRISMATIC COEFFICIENT	.7043	
BLOCK COEFFICIENT	.5462	

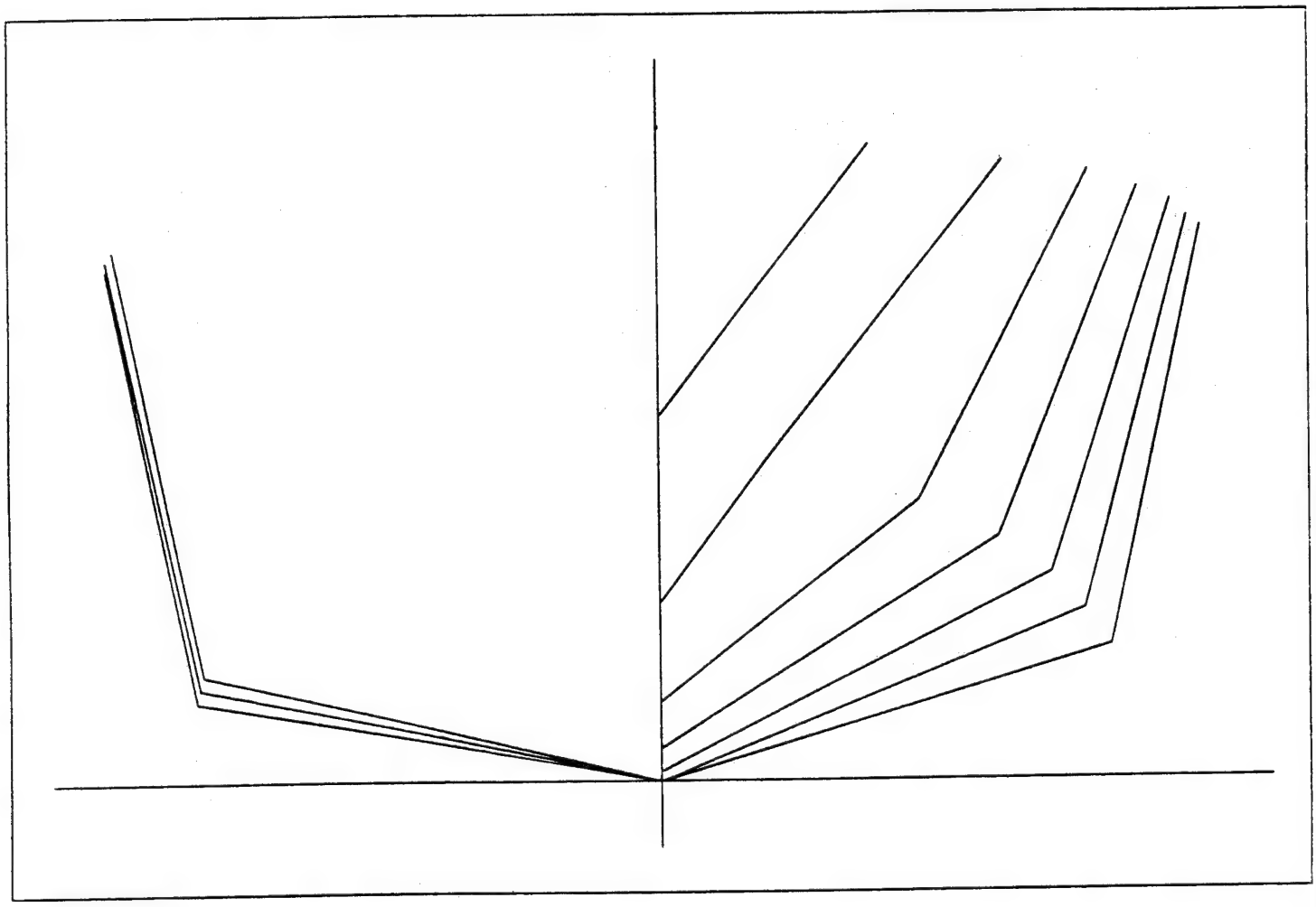
4 INPUT DISPLS	2.173	2.173	2.173	2.173	
4 INPUT LCGS	-2.511	-2.511	-2.511	-2.511	
1 INPUT POLES	.000				
9 INPUT HEELS	.000	5.000	10.000	15.000	20.000
	30.000	40.000	50.000	60.000	

DEFINITIONS

DISPL	DISPLACEMENT IN TONS SW
LCG	LCG IN FEET FROM AMIDSHIPS (+ FWD)
HEEL	INPUT HEEL ANGLE IN DEGREES
TCB	TRANSVERSE CENTER OF BUOYANCY FROM CL IN FEET
VCB	VERTICAL CENTER OF BUOYANCY ABOVE BL IN FEET
RA	RIGHTING ARM IN FEET
DRAFT	DRAFT AMIDSHIPS IN FEET
TRIM	TOTAL TRIM IN FEET (+ BY STERN)

INTACT CURVES OF STATICAL STABILITY

DISPL	LCG	POLE HT	HEEL	RA	TCB	VCB	DRAFT	TRIM
2.173	-2.511	.00	.000	.000	.000	.766	1.250	.000
			5.000	.352	.285	.778	1.246	.007
			10.000	.704	.571	.816	1.233	.027
			15.000	1.054	.855	.879	1.208	.064
			20.000	1.361	1.100	.956	1.160	.095
			30.000	1.863	1.494	1.138	.978	.111
			40.000	2.248	1.800	1.351	.676	.104
			50.000	2.455	1.988	1.537	.226	.302
			60.000	2.508	2.094	1.687	-.453	.617
2.173	-2.511	1.00	.000	.000	.000	.766	1.250	.000
			5.000	.265	.285	.778	1.246	.007
			10.000	.531	.571	.816	1.233	.027
			15.000	.795	.855	.879	1.208	.064
			20.000	1.019	1.100	.956	1.160	.095
			30.000	1.363	1.494	1.138	.978	.111
			40.000	1.605	1.800	1.351	.676	.104
			50.000	1.689	1.988	1.537	.226	.302
			60.000	1.642	2.094	1.687	-.453	.617
2.173	-2.511	2.00	.000	.000	.000	.766	1.250	.000
			5.000	.177	.285	.778	1.246	.007
			10.000	.357	.571	.816	1.233	.027
			15.000	.536	.855	.879	1.208	.064
			20.000	.677	1.100	.956	1.160	.095
			30.000	.863	1.494	1.138	.978	.111
			40.000	.962	1.800	1.351	.676	.104
			50.000	.923	1.988	1.537	.226	.302
			60.000	.776	2.094	1.687	-.453	.617
2.173	-2.511	3.00	.000	.000	.000	.766	1.250	.000
			5.000	.090	.285	.778	1.246	.007
			10.000	.183	.571	.816	1.233	.027
			15.000	.277	.855	.879	1.208	.064
			20.000	.335	1.100	.956	1.160	.095
			30.000	.363	1.494	1.138	.978	.111
			40.000	.319	1.800	1.351	.676	.104
			50.000	.157	1.988	1.537	.226	.302
			60.000	-.090	2.094	1.687	-.453	.617



HYDROSTATICS - PART I TRIM .000 FEET

	DRAFT	VOLUME	DISPLACEMENT	LCB	KB	WETTED SURFACE	PRISMATIC COEF	WPLANE COEF	WPLANE I COEF
	.50	17.	.5	-3.11	.33	70.	.636	.642	.0453
	1.00	55.	1.6	-2.69	.63	93.	.684	.750	.0561
DWL	1.25	76.	2.2	-2.51	.77	103.	.704	.776	.0582
	1.50	98.	2.8	-2.36	..90	112.	.721	.793	.0594
	2.00	144.	4.1	-2.14	1.18	130.	.746	.815	.0607
	2.50	193.	5.5	-1.97	1.45	148.	.764	.837	.0619
	3.00	245.	7.0	-1.83	1.72	167.	.779	.860	.0635
	3.50	279.	8.0	-1.54	1.90	180.	.819	.264	.0144

HYDROSTATICS - PART II TRIM .000 FEET

	DRAFT	WPLANE AREA	LCF	TPI	CIDOFTS	LONG. BM	TRNSV BM	LONG. KM	TRNSV KM	MT1
	.50	68.	-3.03	.16	.33	53.3	9.80	53.6	10.13	.1
	1.00	82.	-2.15	.20	.28	24.5	4.13	25.2	4.76	.2
DWL	1.25	86.	-1.92	.21	.26	19.8	3.27	20.6	4.03	.2
	1.50	90.	-1.77	.21	.25	16.6	2.71	17.6	3.62	.2
	2.00	95.	-1.56	.23	.24	12.8	2.08	13.9	3.25	.2
	2.50	101.	-1.35	.24	.22	10.7	1.74	12.2	3.19	.3
	3.00	107.	-1.12	.25	.19	9.6	1.54	11.3	3.26	.3
	3.50	33.	5.04	.08	-.27	.4	.32	2.3	2.22	0.0

SECTIONAL AREAS IN SQUARE FEET - PART 1 TRIM .000 FEET

	STATION	.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000
	DRAFT								
	.50	.00	.00	.00	.00	.14	.39	.63	.86
	1.00	.00	.00	.00	.33	1.03	1.77	2.52	3.32
DWL	1.25	.00	.00	.01	.74	1.77	2.83	3.85	4.77
	1.50	.00	.00	.11	1.31	2.71	4.07	5.23	6.25
	2.00	.00	.00	.60	2.89	4.93	6.68	8.08	9.28
	2.50	.00	.04	1.47	4.78	7.36	9.45	11.07	12.43
	3.00	.00	.41	2.75	6.93	9.99	12.39	14.19	15.69
	3.50	.00	1.17	4.41	9.34	12.82	15.50	17.45	18.77

SECTIONAL AREAS IN SQUARE FEET - PART 2 TRIM .000 FEET

	STATION	8.000	9.000	10.000	11.000	12.000	13.000	14.000	15.000
	DRAFT								
	.50	1.09	1.26	1.47	1.47	1.47	1.47	1.47	1.47
	1.00	3.89	4.18	4.46	4.46	4.46	4.46	4.46	4.46
DWL	1.25	5.39	5.69	6.00	6.00	6.00	6.00	6.00	6.00
	1.50	6.91	7.24	7.56	7.56	7.56	7.56	7.56	7.56
	2.00	10.03	10.41	10.75	10.75	10.75	10.75	10.75	10.75
	2.50	13.26	13.69	14.06	14.06	14.06	14.06	14.06	14.06
	3.00	16.60	17.07	17.46	17.46	17.46	17.46	17.46	17.46
	3.50	18.88	18.96	18.91	18.91	18.91	18.91	18.91	18.91

SECTIONAL AREAS IN SQUARE FEET - PART 3 TRIM .000 FEET

STATION	16.000	17.000	18.000
DRAFT			
.50	1.47	1.47	1.47
1.00	4.46	4.46	4.46
DWL 1.25	6.00	6.00	6.00
1.50	7.56	7.56	7.56
2.00	10.75	10.75	10.75
2.50	14.06	14.06	14.06
3.00	17.46	17.46	17.46
3.50	18.91	18.91	18.91

THE UNIVERSITY OF MICHIGAN
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HYDROSTATICS PROPERTIES PROGRAM - HYDRO-1.1
ADAPTED FROM THE SHIP HULL CHARACTERISTICS PROGRAM - SHCP

SHIP IDENTIFIER- 18' speed boat rev. 0 SHIP NO.- 91

COND/RUN IDENTIFIER- UL 18' speedboat trimmed hydro DATE-07/13/91

DESIGN DISPLACEMENT	2.173	TONS SW
DESIGN LCG	-2.511	FEET FROM AMIDSHIPS (+ FWD)
DESIGN DRAFT	1.250	FEET
DESIGN TRIM	.000	FEET (+ BY STERN)
LENGTH OVERALL	18.000	FEET
LENGTH BETWEEN PERPENDICULARS	18.000	FEET
LENGTH ON DESIGN WATERLINE	16.022	FEET
STATION OF MAX AREA - AT DWL	11.000	FEET FROM FP
BEAM AT STATION OF MAX AREA	6.187	FEET
SECTION AREA COEFFICIENT	.7755	
PRISMATIC COEFFICIENT	.7043	
BLOCK COEFFICIENT	.5462	

WATERLINES IN FEET

.50
.60
.70
.80
.90
1.00
1.10
1.20
1.25 DWL

DESIGN WATERLINE INDICATED BY DWL

TRIMS IN FEET (+ BY STERN)

1.506
1.089
.803
.787

UNITS AND DEFINITIONS

CIDOFTS,	CHANGE IN DISPLACEMENT FOR ONE FOOT TRIM BY STERN IN TONS
DISPLACEMENT	DISPLACEMENT IN LONG TONS
KB	HEIGHT OF CENTER OF BUOYANCY ABOVE BASELINE IN FEET
LCB	LONGITUDINAL CENTER OF BUOYANCY IN FEET FROM AMIDSHIPS (+ FWD)
LCF	LONGITUDINAL CENTER OF FLOTATION IN FEET FROM AMIDSHIPS (+ FWD)
LONG.BM	LONGITUDINAL BM IN FEET
LONG.KM	LONGITUDINAL KM IN FEET
MT1	MOMENT TO CHANGE TRIM ONE INCH IN FOOT TONS
PRISMATIC	PRISMATIC COEFFICIENT - VOLUME/(LBP X AREA*)
TPI	TONS PER INCH IMMERSION
TRNSV BM	TRANSVERSE BM IN FEET
TRNSV KM	TRANSVERSE KM IN FEET
VOLUME	DISPLACED VOLUME IN CUBIC FEET
WETTED SURFACE	SURFACE AREA OF WETTED PORTION OF HULLIN SQUARE FEET
WPLANE AREA	AREA OF WATERPLANE IN SQUARE FEET
WPLANE COEF	WATERPLANE COEFFICIENT - WATERPLANE AREA/(LBP X BEAM*)
WPLANE I COEF	INERTIA COEFT - WPLANE TRANSV.INERTIA/(LBP X BEAM* CUBED)

AREA* AND BEAM* ARE PROPERTIES AT THE TABULATED DRAFT
OF THE STATION OF MAXIMUM AREA AT DESIGN DRAFT

HYDROSTATICS - PART I TRIM 1.506 FEET

	DRAFT	VOLUME	DISPLACEMENT	LCB	KB	WETTED SURFACE	PRISMATIC COEF	WPLANE COEF	WPLANE I COEF
	.50	35.	1.0	-5.08	.57	71.	.796	.597	.0453
	.60	42.	1.2	-4.83	.61	76.	.761	.628	.0484
	.70	49.	1.4	-4.61	.66	80.	.741	.650	.0500
	.80	56.	1.6	-4.41	.70	85.	.729	.670	.0516
	.90	63.	1.8	-4.24	.75	89.	.723	.689	.0530
	1.00	71.	2.0	-4.07	.80	94.	.720	.708	.0549
	1.10	79.	2.3	-3.93	.84	98.	.720	.720	.0554
	1.20	87.	2.5	-3.79	.89	102.	.720	.732	.0561
DWL	1.25	91.	2.6	-3.73	.91	104.	.721	.737	.0565

HYDROSTATICS - PART II TRIM 1.506 FEET

	DRAFT	WPLANE AREA	LCF	TPI	CIDOFTS	LONG. BM	TRNSV BM	LONG. KM	TRNSV KM	MT1
	.50	64.	-3.63	.15	.37	19.1	4.86	19.7	5.43	.1
	.60	68.	-3.37	.16	.36	18.4	4.46	19.1	5.08	.1
	.70	71.	-3.17	.17	.36	17.6	4.04	18.3	4.70	.1
	.80	73.	-3.00	.17	.35	16.8	3.71	17.5	4.41	.1
	.90	76.	-2.83	.18	.34	16.2	3.43	16.9	4.18	.1
	1.00	78.	-2.67	.19	.33	15.7	3.23	16.5	4.03	.1
	1.10	80.	-2.55	.19	.32	15.0	3.00	15.8	3.84	.2
	1.20	82.	-2.44	.20	.32	14.4	2.81	15.3	3.70	.2
DWL	1.25	83.	-2.38	.20	.31	14.2	2.73	15.1	3.64	.2

HYDROSTATICS - PART I TRIM 1.089 FEET

	DRAFT	VOLUME	DISPLACEMENT	LCB	KB	WETTED SURFACE	PRISMATIC COEF	WPLANE COEF	WPLANE I COEF
	.50	30.	.9	-4.81	.50	70.	.761	.607	.0451
	.60	37.	1.0	-4.55	.55	76.	.732	.640	.0485
	.70	44.	1.2	-4.32	.59	80.	.718	.663	.0503
	.80	51.	1.5	-4.12	.64	85.	.711	.683	.0519
	.90	59.	1.7	-3.94	.69	89.	.709	.703	.0536
	1.00	66.	1.9	-3.78	.74	94.	.709	.719	.0550
	1.10	74.	2.1	-3.63	.79	98.	.711	.731	.0557
	1.20	83.	2.4	-3.51	.84	102.	.714	.743	.0566
DWL	1.25	87.	2.5	-3.45	.86	104.	.715	.749	.0570

HYDROSTATICS - PART II TRIM 1.089 FEET

	DRAFT	WPLANE AREA	LCF	TPI	CIDOFTS	LONG. BM	TRNSV BM	LONG. KM	TRNSV KM	MT1
	.50	65.	-3.49	.15	.36	24.1	5.64	24.6	6.14	.1
	.60	69.	-3.23	.16	.35	22.5	5.06	23.1	5.60	.1
	.70	72.	-3.02	.17	.34	21.0	4.50	21.6	5.09	.1
	.80	74.	-2.84	.18	.34	19.8	4.06	20.4	4.70	.1
	.90	77.	-2.67	.18	.33	18.7	3.73	19.4	4.41	.1
	1.00	79.	-2.52	.19	.32	17.8	3.44	18.5	4.18	.2
	1.10	81.	-2.41	.19	.31	16.8	3.17	17.6	3.96	.2
	1.20	83.	-2.30	.20	.30	16.0	2.96	16.9	3.80	.2
DWL	1.25	84.	-2.24	.20	.30	15.6	2.87	16.5	3.73	.2

HYDROSTATICS - PART I TRIM .803 FEET

	DRAFT	VOLUME	DISPLACEMENT	LCB	KB	WETTED SURFACE	PRISMATIC COEF	WPLANE COEF	WPLANE I COEF
	.50	26.	.8	-4.55	.45	70.	.734	.615	.0451
	.60	33.	.9	-4.28	.50	75.	.711	.649	.0486
	.70	40.	1.2	-4.06	.55	80.	.702	.673	.0507
	.80	48.	1.4	-3.86	.60	85.	.699	.693	.0523
	.90	55.	1.6	-3.69	.65	90.	.700	.713	.0542
	1.00	63.	1.8	-3.54	.70	94.	.702	.727	.0552
	1.10	71.	2.0	-3.41	.75	98.	.706	.739	.0560
	1.20	80.	2.3	-3.29	.81	102.	.709	.751	.0569
DWL	1.25	84.	2.4	-3.23	.83	104.	.711	.756	.0572

HYDROSTATICS - PART II TRIM .803 FEET

	DRAFT	WPLANE AREA	LCF	TPI	CIDOFTS	LONG. BM	TRNSV BM	LONG. KM	TRNSV KM	MT1
	.50	65.	-3.38	.16	.35	28.8	6.35	29.3	6.80	.1
	.60	70.	-3.12	.17	.34	26.1	5.57	26.6	6.07	.1
	.70	73.	-2.91	.17	.33	23.9	4.88	24.5	5.43	.1
	.80	75.	-2.72	.18	.33	22.2	4.34	22.8	4.94	.1
	.90	78.	-2.55	.19	.32	20.8	3.96	21.4	4.61	.2
	1.00	80.	-2.42	.19	.31	19.4	3.60	20.1	4.30	.2
	1.10	82.	-2.31	.20	.30	18.2	3.30	18.9	4.06	.2
	1.20	84.	-2.20	.20	.29	17.2	3.07	18.0	3.88	.2
DWL	1.25	85.	-2.16	.20	.29	16.7	2.96	17.5	3.79	.2

HYDROSTATICS - PART I TRIM .787 FEET

	DRAFT	VOLUME	DISPLACEMENT	LCB	KB	WETTED SURFACE	PRISMATIC COEF	WPLANE COEF	WPLANE I COEF
	.50	26.	.7	-4.53	.45	70.	.732	.616	.0451
	.60	33.	.9	-4.27	.50	75.	.710	.649	.0486
	.70	40.	1.1	-4.04	.55	80.	.701	.673	.0507
	.80	48.	1.4	-3.85	.60	85.	.698	.694	.0523
	.90	55.	1.6	-3.68	.65	90.	.699	.714	.0542
	1.00	63.	1.8	-3.52	.70	94.	.702	.728	.0552
	1.10	71.	2.0	-3.39	.75	98.	.705	.740	.0560
	1.20	80.	2.3	-3.27	.80	102.	.709	.752	.0569
DWL	1.25	84.	2.4	-3.22	.83	104.	.711	.756	.0572

HYDROSTATICS - PART II TRIM .787 FEET

	DRAFT	WPLANE AREA	LCF	TPI	CIDOFTS	LONG. BM	TRNSV BM	LONG. KM	TRNSV KM	MT1
	.50	66.	-3.38	.16	.35	29.1	6.39	29.6	6.84	.1
	.60	70.	-3.11	.17	.34	26.4	5.60	26.9	6.10	.1
	.70	73.	-2.90	.17	.33	24.1	4.90	24.7	5.45	.1
	.80	75.	-2.72	.18	.33	22.3	4.36	22.9	4.96	.1
	.90	78.	-2.55	.19	.32	20.9	3.97	21.5	4.62	.2
	1.00	80.	-2.42	.19	.31	19.5	3.61	20.2	4.31	.2
	1.10	82.	-2.31	.20	.30	18.3	3.31	19.0	4.06	.2
	1.20	84.	-2.20	.20	.29	17.2	3.08	18.0	3.88	.2
DWL	1.25	85.	-2.16	.20	.29	16.7	2.97	17.6	3.80	.2

SECTIONAL AREAS IN SQUARE FEET - PART 1 TRIM 1.506 FEET

STATION DRAFT	.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000
.50	.00	.00	.00	.00	.00	.02	.16	.38
.60	.00	.00	.00	.00	.00	.09	.31	.64
.70	.00	.00	.00	.00	.01	.19	.51	.97
.80	.00	.00	.00	.00	.05	.33	.76	1.37
.90	.00	.00	.00	.00	.13	.51	1.07	1.83
1.00	.00	.00	.00	.00	.23	.73	1.42	2.37
1.10	.00	.00	.00	.01	.37	1.00	1.82	2.94
1.20	.00	.00	.00	.05	.54	1.30	2.27	3.51
DWL 1.25	.00	.00	.00	.08	.64	1.46	2.51	3.80

SECTIONAL AREAS IN SQUARE FEET - PART 2 TRIM 1.506 FEET

STATION DRAFT	8.000	9.000	10.000	11.000	12.000	13.000	14.000	15.000
.50	.76	1.26	1.97	2.46	2.96	3.46	3.97	4.48
.60	1.16	1.81	2.56	3.06	3.56	4.07	4.58	5.09
.70	1.66	2.39	3.16	3.66	4.17	4.68	5.19	5.70
.80	2.22	2.98	3.76	4.27	4.77	5.29	5.80	6.32
.90	2.81	3.58	4.36	4.87	5.39	5.90	6.42	6.94
1.00	3.40	4.18	4.97	5.49	6.00	6.52	7.05	7.57
1.10	3.99	4.78	5.59	6.11	6.62	7.15	7.67	8.20
1.20	4.58	5.39	6.21	6.73	7.25	7.78	8.30	8.84
DWL 1.25	4.88	5.69	6.52	7.04	7.56	8.09	8.62	9.16

SECTIONAL AREAS IN SQUARE FEET - PART 3 TRIM 1.506 FEET

STATION DRAFT	16.000	17.000	18.000
.50	4.99	5.50	6.02
.60	5.60	6.12	6.64
.70	6.22	6.74	7.26
.80	6.84	7.36	7.89
.90	7.47	7.99	8.52
1.00	8.10	8.63	9.16
1.10	8.73	9.27	9.80
1.20	9.37	9.91	10.45
DWL 1.25	9.69	10.23	10.77

SECTIONAL AREAS IN SQUARE FEET - PART 1 TRIM 1.089 FEET

STATION DRAFT	.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000
.50	.00	.00	.00	.00	.00	.08	.26	.49
.60	.00	.00	.00	.00	.01	.18	.45	.79
.70	.00	.00	.00	.00	.06	.32	.68	1.15
.80	.00	.00	.00	.00	.14	.50	.97	1.58
.90	.00	.00	.00	0.00	.25	.72	1.30	2.07
1.00	.00	.00	.00	.03	.40	.98	1.69	2.63
1.10	.00	.00	.00	.08	.57	1.27	2.13	3.20
1.20	.00	.00	.00	.15	.78	1.61	2.61	3.78
DWL 1.25	.00	.00	.00	.20	.90	1.80	2.87	4.06

SECTIONAL AREAS IN SQUARE FEET - PART 2 TRIM 1.089 FEET

STATION DRAFT	8.000	9.000	10.000	11.000	12.000	13.000	14.000	15.000
.50	.84	1.26	1.83	2.19	2.55	2.91	3.27	3.63
.60	1.27	1.81	2.42	2.78	3.14	3.51	3.87	4.24
.70	1.78	2.39	3.02	3.38	3.75	4.11	4.48	4.85
.80	2.36	2.98	3.62	3.98	4.35	4.72	5.09	5.46
.90	2.94	3.58	4.22	4.59	4.96	5.33	5.70	6.08
1.00	3.53	4.18	4.83	5.20	5.57	5.95	6.32	6.70
1.10	4.13	4.78	5.45	5.82	6.19	6.57	6.95	7.33
1.20	4.72	5.39	6.06	6.44	6.81	7.19	7.57	7.95
DWL 1.25	5.02	5.69	6.37	6.75	7.13	7.51	7.89	8.27

SECTIONAL AREAS IN SQUARE FEET - PART 3 TRIM 1.089 FEET

STATION DRAFT	16.000	17.000	18.000
.50	4.00	4.37	4.74
.60	4.61	4.98	5.35
.70	5.22	5.59	5.96
.80	5.83	6.21	6.58
.90	6.45	6.83	7.21
1.00	7.08	7.46	7.84
1.10	7.71	8.09	8.47
1.20	8.34	8.72	9.11
DWL 1.25	8.66	9.04	9.43

SECTIONAL AREAS IN SQUARE FEET - PART 1 TRIM .803 FEET

STATION DRAFT	.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000
.50	.00	.00	.00	.00	.01	.14	.34	.58
.60	.00	.00	.00	.00	.05	.26	.55	.89
.70	.00	.00	.00	.00	.12	.43	.81	1.28
.80	.00	.00	.00	0.00	.23	.63	1.12	1.73
.90	.00	.00	.00	.03	.36	.88	1.48	2.24
1.00	.00	.00	.00	.07	.53	1.16	1.89	2.81
1.10	.00	.00	.00	.15	.73	1.49	2.35	3.38
1.20	.00	.00	.00	.25	.97	1.85	2.86	3.96
DWL 1.25	.00	.00	.00	.31	1.10	2.05	3.13	4.25

SECTIONAL AREAS IN SQUARE FEET - PART 2 TRIM .803 FEET

STATION DRAFT	8.000	9.000	10.000	11.000	12.000	13.000	14.000	15.000
.50	.91	1.26	1.74	2.00	2.26	2.53	2.79	3.06
.60	1.35	1.81	2.33	2.59	2.86	3.13	3.39	3.66
.70	1.87	2.39	2.92	3.19	3.46	3.73	4.00	4.27
.80	2.45	2.98	3.52	3.79	4.06	4.33	4.60	4.88
.90	3.04	3.58	4.13	4.40	4.67	4.94	5.22	5.49
1.00	3.63	4.18	4.74	5.01	5.28	5.56	5.83	6.11
1.10	4.22	4.78	5.35	5.62	5.90	6.17	6.45	6.73
1.20	4.82	5.39	5.96	6.24	6.52	6.80	7.07	7.35
DWL 1.25	5.12	5.69	6.27	6.55	6.83	7.11	7.39	7.67

SECTIONAL AREAS IN SQUARE FEET - PART 3 TRIM .803 FEET

STATION DRAFT	16.000	17.000	18.000
.50	3.33	3.60	3.87
.60	3.93	4.20	4.47
.70	4.54	4.81	5.08
.80	5.15	5.42	5.70
.90	5.76	6.04	6.32
1.00	6.38	6.66	6.94
1.10	7.01	7.29	7.57
1.20	7.63	7.92	8.20
DWL 1.25	7.95	8.23	8.52

SECTIONAL AREAS IN SQUARE FEET - PART 1 TRIM .787 FEET

STATION DRAFT	.000	1.000	2.000	3.000	4.000	5.000	6.000	7.000
.50	.00	.00	.00	.00	.01	.14	.35	.59
.60	.00	.00	.00	.00	.05	.27	.56	.90
.70	.00	.00	.00	.00	.13	.43	.82	1.28
.80	.00	.00	.00	0.00	.23	.64	1.13	1.73
.90	.00	.00	.00	.03	.37	.89	1.49	2.25
1.00	.00	.00	.00	.08	.54	1.17	1.90	2.82
1.10	.00	.00	.00	.15	.74	1.50	2.37	3.39
1.20	.00	.00	.00	.26	.98	1.86	2.88	3.97
DWL 1.25	.00	.00	.00	.32	1.11	2.06	3.14	4.26

SECTIONAL AREAS IN SQUARE FEET - PART 2 TRIM .787 FEET

STATION DRAFT	8.000	9.000	10.000	11.000	12.000	13.000	14.000	15.000
.50	.91	1.26	1.73	1.99	2.25	2.51	2.77	3.03
.60	1.35	1.81	2.32	2.58	2.84	3.10	3.37	3.63
.70	1.88	2.39	2.92	3.18	3.44	3.71	3.97	4.24
.80	2.46	2.98	3.52	3.78	4.05	4.31	4.58	4.84
.90	3.04	3.58	4.12	4.39	4.65	4.92	5.19	5.46
1.00	3.63	4.18	4.73	5.00	5.27	5.53	5.80	6.07
1.10	4.22	4.78	5.34	5.61	5.88	6.15	6.42	6.70
1.20	4.82	5.39	5.96	6.23	6.50	6.77	7.05	7.32
DWL 1.25	5.12	5.69	6.27	6.54	6.81	7.09	7.36	7.64

SECTIONAL AREAS IN SQUARE FEET - PART 3 TRIM .787 FEET

STATION DRAFT	16.000	17.000	18.000
.50	3.29	3.55	3.82
.60	3.89	4.16	4.42
.70	4.50	4.77	5.03
.80	5.11	5.38	5.65
.90	5.73	6.00	6.27
1.00	6.35	6.62	6.89
1.10	6.97	7.24	7.52
1.20	7.60	7.87	8.15
DWL 1.25	7.91	8.19	8.46

27 JUNE 1991

TABLE OF OFFSETS

UL GENERIC 18' PLANING HULL

LOA = 18.0'
BOA = 7.0'
STATION SPACING = 1.0'
ALL DIMENSIONS ARE IN FEET

STA NO	PROFILE HT.	CHINE		DECK	
		HT	½ BEAM	HT	½ BEAM
0	4.083	—	—	4.104	—
1	2.292	—	—	3.979	1.333
2	1.125	2.042	0.708	3.875	2.167
3	0.500	1.750	1.625	3.813	2.708
4	0.208	1.521	2.125	3.708	3.021
5	0.063	1.292	2.458	3.625	3.229
6	0.000	1.063	2.667	3.521	3.333
7	↓	0.833	2.833	3.458	3.417
8		0.667	2.896	3.333	3.458
9		0.583	2.917	3.271	3.500
10		0.500	2.938	3.208	↓
11		↓	↓	↓	
12					
13					
14					
15					
16					
17					
TRANSOM	↓				